



TOWN OF DISCOVERY BAY
A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

**TOWN OF DISCOVERY BAY
COMMUNITY SERVICES DISTRICT
AGENDA PACKET**

For the Special Meeting of Tuesday
April 14, 2015

6:00 P.M. Special Meeting

District Office
1800 Willow Lake Road



TOWN OF DISCOVERY BAY

A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

**NOTICE, CALL, AND AGENDA
OF A SPECIAL MEETING
OF THE BOARD OF DIRECTORS
OF THE TOWN OF DISCOVERY BAY
Tuesday April 14, 2015
SPECIAL MEETING 6:00 P.M.
1800 Willow Lake Road, Discovery Bay, California
Website address: www.todb.ca.gov**

SPECIAL MEETING 6:00 P.M.

A. ROLL CALL AND PLEDGE OF ALLEGIANCE

1. Call business meeting to order 6:00 p.m.
2. Pledge of Allegiance
3. Roll Call

B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)

During Public Comments, the public may address the Board on any issue within the District's jurisdiction which is not on the agenda. The public may comment on any item on the Agenda at the time that item is before the Board for consideration. Any person wishing to speak must come up and speak from the podium. There will be no dialog between the Board and the commenter. Any clarifying questions from the Board must go through the Chair.

C. PRESENTATIONS

D. PRESIDENT REPORT AND DIRECTORS' COMMENTS

E. CONSENT CALENDAR

All matters listed under the CONSENT CALENDAR are considered by the District to be routine and will be enacted by one motion.

1. Approval of DRAFT minutes of special meeting for April 1, 2015
2. Approve Register of District Invoices
3. Purchase Emergency Stand-By Generator for Well No. 7

F. BUSINESS AND ACTION ITEMS

1. Review Urban Water Management Plan
2. Groundwater Sustainability Plan Proposal for Services

G. INFORMATIONAL ITEMS ONLY (NO ACTION NECESSARY)

1. Drought – Governor's Executive Order requiring 25% Water Reduction

H. VEOLIA REPORT

1. Veolia Report – Month of March 2015

I. MANAGER'S REPORTS – Discussion and Possible Action

J. GENERAL MANAGER'S REPORT – Discussion and Possible Action

K. DISTRICT LEGAL COUNSEL REPORT

L. COMMITTEE UPDATES – Discussion and Possible Action

M. CORRESPONDENCE – Discussion and Possible Action

1. R – Contra Costa County Aviation Advisory Committee meeting minutes for 02-12-15
2. R – State Route 4 Bypass meeting minutes for 02-12-15
3. R – East Contra Costa Fire Protection District meeting minutes for 03-02-15
4. R – Contra Costa County Aviation Advisory Committee meeting minutes for 03-12-15

N. PUBLIC RECORD REQUESTS RECEIVED

O. FUTURE AGENDA ITEMS

P. ADJOURNMENT

1. Adjourn to the next Regular meeting on May 6, 2015 starting at 7:00 p.m. on 1800 Willow Lake Road- Located behind the Delta Community Presbyterian Church.

“This agenda shall be made available upon request in alternative formats to persons with a disability, as required by the American with Disabilities Act of 1990 (42 U.S.C. § 12132) and the Ralph M. Brown Act (California Government Code § 54954.2). Persons requesting a disability related modification or accommodation in order to participate in the meeting should contact the Town of Discovery Bay, at (925)634-1131, during regular business hours, at least twenty-four hours prior to the time of the meeting.”

"Materials related to an item on the Agenda submitted to the Town of Discovery Bay CSD after distribution of the agenda packet are available for public inspection in the District Office located at 1800 Willow Lake Road during normal business hours."



TOWN OF DISCOVERY BAY
A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

No Back Up
Documentation
For Agenda Item C



TOWN OF DISCOVERY BAY
A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

No Back Up
Documentation
For Agenda Item D



TOWN OF DISCOVERY BAY

A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

**MINUTES OF THE REGULAR MEETING
OF THE BOARD OF DIRECTORS
OF THE TOWN OF DISCOVERY BAY
Wednesday April 1, 2015
REGULAR MEETING 7:00 P.M.
1800 Willow Lake Road, Discovery Bay, California
Website address: www.todb.ca.gov**

REGULAR MEETING 7:00 P.M.

A. ROLL CALL AND PLEDGE OF ALLEGIANCE

Call business meeting to order – 7:00 p.m. by President Steele
Pledge of Allegiance – Led by Director Simon
Roll Call – All Present with the exception of Vice-President Pease

B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)

None

C. AREA AGENCIES REPORTS / PRESENTATION

1 Sheriff's Office Report

Sheriff Representative David Allain – Provided the law enforcement report for the month of March.

2. CHP Report

Officer Thomas – Provided an update of the services to the Town of Discovery Bay. There was discussion between Officer Thomas and the Board.

3. East Contra Costa Fire Protection District Report

Chief Henderson – Provided an East Contra Costa Fire Protection District update. There was discussion between Chief Henderson and the Board.

4. Supervisor Mary Piepho, District III Report – No Report

D. COMMITTEE/LIAISON REPORTS

1. Trans-Plan Report – No Report

2. County Planning Commission Report – No Report

3. Code Enforcement Report – Director Leete stated there was a meeting and there is nothing to report

4. Special Districts Report – No Report**

**These meetings are held Quarterly

E. PRESENTATIONS

None

F. CONSENT CALENDAR

All matters listed under the CONSENT CALENDAR are considered by the District to be routine and will be enacted by one motion.

1. Approval of DRAFT minutes of special meeting for March 18, 2015

2. Approval of DRAFT minutes of regular meeting for March 18, 2015

3. Approve Register of District Invoices

Motion by: Director Simon to approve the Consent Calendar

Second by: Director Graves

Vote: Motion Carried – AYES: 4 – President Steele, Director Graves, Director Leete, Director Simon; NOES: 0, ABSENT: 1 – Vice-President Pease

G. BUSINESS AND ACTION ITEMS

1. East Contra Costa Fire Protection District Benefit Assessment Official Ballot

General Manager Howard – Provided the details of item G-1.

Motion by: President Steele to approve the Benefit Assessment Official Ballot

Second: Director Graves

Vote: Motion Carried – AYES: 4 – President Steele, Director Graves, Director Leete, Director Simon, NOES: 0, ABSENT: Vice President Pease

2. Storage Space Lease Agreement between the Town of Discovery Bay and the Discovery Bay Lion's Club and the Discovery Bay Community Foundation

General Manager Howard – Provided the details of item G-2. There was discussion between the General Manager and the Board. There was one Public Comment Speaker.

Motion by: Director Simon to Approve storage Lease Agreement between the Town of Discovery Bay and the Discovery Bay Lion's Club for use of Town of Discovery Bay property located on Firwood Dr. at gate on Discovery Bay Blvd (AKA Well Site 4); and storage Lease Agreement between the Town of Discovery Bay and the Discovery Bay Community Foundation for use of Town of Discovery Bay property located on Edgeview Drive at gate on Discovery Bay Blvd (AKA Well Site 3)

Second by: Director Leete

Vote: Motion Carried – AYES: 4 – President Steele, Director Graves, Director Leete, Director Simon, NOES: 0, ABSENT: Vice President Pease

H. INFORMATIONAL ITEMS ONLY (NO ACTION NECESSARY)

1. State Water Resources Control Board Proposed Emergency Water Conservation Regulations

General Manager Howard – Provided the details of item H-1. There was discussion between the General Manager and the Board.

I. PRESIDENT REPORT AND DIRECTORS' COMMENTS

None

J. MANAGER'S REPORT – Discussion and Possible Action

None

K. GENERAL MANAGER'S REPORT – Discussion and Possible Action

1. Discuss Urban Water Management Plan – Schedule Workshop

General Manager Howard – Provided the details of item K-1. There was discussion between the General Manager and the Board.

2. Employee Medical Benefit Update

General Manager Howard – Provided the details of item K-2. There was discussion between the General Manager and the Board.

General Manager Howard also provided details regarding the Board room at the Community Center. There was discussion between the General Manager and the Board.

L. DISTRICT LEGAL COUNSEL REPORT

None

M. COMMITTEE UPDATES – Discussion and Possible Action

General Manager Howard – Stated that there were two committee meetings this past week – Community Center meeting and Wastewater meeting.

N. CORRESPONDENCE – Discussion and Possible Action

1. R - Letter from Department of Transportation responding to Parking on Hwy 4

O. PUBLIC RECORD REQUESTS RECEIVED

1. Request for Listing of Water & Sewer Permits in the Last 24 Months received March 12, 2015 from Valbridge Property Advisors

P. FUTURE AGENDA ITEMS

None

Q. ADJOURNMENT

The meeting adjourned at 7:42 p.m. to the next regular meeting dated April 15, 2015 starting at 7:00 p.m. on 1800 Willow Lake Road.

//cmc – 04-06-15

<http://www.todb.ca.gov/page/576/>



Town of Discovery Bay

"A Community Services District"

AGENDA REPORT

Meeting Date

April 15, 2015

Prepared By: Dina Breitstein, Finance Manager & Lesley Marable, Sr. Accounts Clerk
Submitted By: Rick Howard, General Manager

RH

Agenda Title

Approve Register of District Invoices

Recommended Action

Staff recommends that the Board approve the listed invoices for payment

Executive Summary

District invoices are paid on a regular basis, and must obtain Board authorization prior to payment. Staff recommends Board authorization in order that the District can continue to pay warrants in a timely manner.

Fiscal Impact:

Amount Requested \$ 500,732.82

Sufficient Budgeted Funds Available?: Yes (If no, see attached fiscal analysis)

Prog/Fund # See listing of invoices. **Category:** Operating Expenses and Capital Improvements

Previous Relevant Board Actions for This Item

Attachments

Request For Authorization to Pay Invoices for the Town of Discovery Bay CSD 2014/2015
Request For Authorization to Pay Invoices for the Discovery Bay Lighting & Landscape District # 8 2014/2015
Request For Authorization to Pay Invoices for the Discovery Bay Lighting & Landscape District # 9 2014/2015

AGENDA ITEM: E-2

Request For Authorization To Pay Invoices (RFA)
For The Meeting On April 15, 2015
Town of Discovery Bay CSD
For Fiscal Year's 7/14 - 6/15

<u>Vendor Name</u>	<u>Invoice Number</u>	<u>Description</u>	<u>Invoice Date</u>	<u>Amount</u>
Administration				
Commercial Tree Care	20924	Landscape Reimb (Z57,Z61)	02/24/15	\$24,236.00
Intelligent Products Inc	190078A	Landscape Reimb (Z57, Z61)	02/25/15	\$637.32
Neumiller & Beardslee	267748	General Services (Z35,Z57,Z61)	03/12/15	\$1,053.50
Village Nurseries Wholesale, LLC	215033	Color Order (Z61)	02/28/15	\$239.24
		Administration	Sub-Total	\$26,166.06
Water				
Alhambra	13710019032015	Water Service	03/20/15	\$14.18
American Retrofit Systems	1072	Hook Up GFI Willow Lake	03/26/15	\$200.00
Animal Damage Control	32815	Pest Control	03/28/15	\$50.00
Bartle Wells Associates	1003	Proposal To Update Water & Wastewater Capacity Fee	11/21/14	\$2,970.00
Brentwood Ace Hardware	808/033115	General Repairs	03/31/15	\$39.93
Brentwood Press & Publishing	10176	Advertising	03/31/15	\$800.00
Byron Bethany Irrigation	17274	Emergency Light System 2015 Truck	03/26/15	\$791.80
Cash	33115	Data Recovery	03/31/15	\$291.85
Cash	40115	Data Recovery	04/01/15	\$51.88
County Of Contra Costa, Dept of Info Tec	9389	Data Processing Jan 2015	02/25/15	\$17.60
County Of Contra Costa, Dept of Info Tec	9444	Data Processing Feb 2015	03/12/15	\$17.60
Discovery Pest Control	143555	Pest Control	03/17/15	\$27.20
J.W. Backhoe & Construction, Inc.	2287	Locate Lateral Newport Lane	02/24/15	\$3,500.00
J.W. Backhoe & Construction, Inc.	2305	Water Leak Willow Lake Rd	03/26/15	\$3,086.78
J.W. Backhoe & Construction, Inc.	2306	Water Leak Starfish Place	03/26/15	\$2,409.05
J.W. Backhoe & Construction, Inc.	2307	Water Leak Discovery Place	03/26/15	\$723.75
J.W. Backhoe & Construction, Inc.	2309	Install 1" Service Discovery Bay Blvd	03/27/15	\$6,811.11
J.W. Backhoe & Construction, Inc.	2310	Water Leak Discovery Bay Blvd	03/30/15	\$3,494.30
National Meter & Automation, Inc.	S1059430.002	Badger Connectors	03/20/15	\$2,330.58
Neumiller & Beardslee	18632-25424	General Services	02/23/15	\$13,940.00
Neumiller & Beardslee	267208	General Services Jan 2015	02/23/15	\$1,351.20
Neumiller & Beardslee	267209	Hofmann v. TODB	02/23/15	\$20.39
Neumiller & Beardslee	267210	Pantages	02/23/15	\$64.50
Neumiller & Beardslee	267748	General Services Feb 2015	03/12/15	\$1,135.20
Office Depot	761084263001	Office Supplies	03/18/15	\$42.94
Office Depot	761491199001	Office Supplies	03/20/15	\$23.68
Ricoh USA, Inc	5035143044	Photocopier	03/18/15	\$101.08
Robin Grube	3636 Sailboat Dr	Closed Account, Refund Overpayment	03/24/15	\$7.27
SDRMA	16799	Medical Benefits May 2015	04/06/15	\$849.46
Shred-It USA-Concord	9405121788	Shredding Service	03/05/15	\$22.68
Sue Heintl	1	Education and Training	03/30/15	\$60.00
U.S. Bank	2015	Debt Service Payment	04/01/15	\$28,037.02
Univar	SJ673747	Chemicals Delivered 03/18/15	03/18/15	\$314.11
Univar	SJ673749	Chemicals Delivered 03/18/15	03/18/15	\$189.27
Veolia Water North America	46986	Monthly O&M April 2015	04/01/15	\$40,403.73
Zee Medical Service Company	724500341	Medical Supplies	04/06/15	\$19.72
		Water	Sub-Total	\$114,209.86
Wastewater				
Alhambra	13710019032015	Water Service	03/20/15	\$21.28
American Retrofit Systems	1071	Power Check Wetlands Pump System	03/26/15	\$100.00
American Retrofit Systems	1075	Replace Fan Motor Newport Lift station	04/01/15	\$450.00
American Retrofit Systems	1076	WWTP#1 AC Unit Repair	04/01/15	\$425.00
Animal Damage Control	32815	Pest Control	03/28/15	\$75.00
Bartle Wells Associates	1003	Proposal To Update Water & Wastewater Capacity Fee	11/21/14	\$4,455.00
Brentwood Ace Hardware	808/033115	General Repairs	03/31/15	\$59.90
Brentwood Press & Publishing	10176	Advertising	03/31/15	\$1,200.00
Byron Bethany Irrigation	17274	Emergency Light System 2015 Truck	03/26/15	\$1,187.70
Cascade Integration And Development	919	SCADA System Upgrade	03/01/15	\$9,187.50
Cascade Integration And Development	921	SCADA System Upgrade	03/18/15	\$5,640.00
Cash	33115	Data Recovery	03/31/15	\$437.78
Cash	40115	Data Recovery	04/01/15	\$77.83
County Of Contra Costa, Dept of Info Tec	9389	Data Processing Jan 2015	02/25/15	\$26.40
County Of Contra Costa, Dept of Info Tec	9444	Data Processing Feb 2015	03/12/15	\$26.40
Discovery Pest Control	143555	Pest Control	03/17/15	\$40.80

Kleinfelder, Inc.	1053373	Groundwater Monitoring Well Installation	03/23/15	\$6,464.25
Neumiller & Beardslee	18632-25424	General Services	02/23/15	\$20,910.00
Neumiller & Beardslee	267208	General Services Jan 2015	02/23/15	\$2,026.80
Neumiller & Beardslee	267209	Hofmann v. TODB	02/23/15	\$30.59
Neumiller & Beardslee	267211	Newport Pointe	02/23/15	\$129.00
Neumiller & Beardslee	267748	General Services Feb 2015	03/12/15	\$1,702.80
Office Depot	761084263001	Office Supplies	03/18/15	\$64.42
Office Depot	761491199001	Office Supplies	03/20/15	\$35.51
Ricoh USA, Inc	5035143044	Photocopier	03/18/15	\$151.63
SDRMA	16799	Medical Benefits May 2015	04/06/15	\$1,274.18
Shred-It USA-Concord	9405121788	Shredding Service	03/05/15	\$34.03
Sue Heintl	1	Education and Training	03/30/15	\$90.00
U.S. Bank	2015	Debt Service Payment	04/01/15	\$235,468.76
Veolia Water North America	46986	Monthly O&M April 2015	04/01/15	\$60,605.60
Zee Medical Service Company	724500341	Medical Supplies	04/06/15	\$29.58

Wastewater	Sub-Total	\$352,427.74
-------------------	------------------	---------------------

Community Center

Community Center	Sub-Total	\$0.00
-------------------------	------------------	---------------

Grand Total	\$492,803.66
--------------------	---------------------

Request For Authorization To Pay Invoices (RFA)
For The Meeting On April 15, 2015
Town of Discovery Bay, D.Bay L&L Park #8
For Fiscal Year's 7/14 - 6/15

<u>Vendor Name</u>	<u>Invoice Number</u>	<u>Description</u>	<u>Invoice Date</u>	<u>Amount</u>
A & L Western Agricultural Labs, Inc.	168019	Soil Testing	03/13/15	\$504.00
Alhambra	13710019032015	Community Center-Water Service	03/20/15	\$54.41
American Retrofit Systems	1060	Repair Lights Front Entrance	03/04/15	\$200.00
American Retrofit Systems	1061	Community Center-Repair Front Lights	03/04/15	\$250.00
Blind To Reason	3	Community Center-Earth Day	04/03/15	\$450.00
Brentwood Ace Hardware	808/033115	Community Center-Building Maintenance	03/31/15	\$32.95
Comcast	8155400350238372/315	Internet Service	03/22/15	\$56.32
Comcast	8155400350238372/315	Community Center-Internet Service	03/22/15	\$56.32
Contra Costa County Fire Protection	15-1739	Community Center-Permit	04/02/15	\$277.50
Contra Costa Fire Equipment	4450	Community Center-Fire Extinguishers	04/07/15	\$194.26
Denalect Alarm Company	R18445	Community Center-Quartile Alarm	04/01/15	\$96.00
Department of Justice	88784	Community Center-Finger Printing	03/04/15	\$49.00
Discovery Bay Disposal	17-0001966/033115	Com2 Yd Bin	03/31/15	\$300.53
Discovery Bay Disposal	17-0013218	Community Center-Com 2 Yd Bin	03/31/15	\$8.16
Karina Dugand	19	Community Center-Program Fees	04/02/15	\$1,116.00
Kidz Love Soccer	2015WI-F122	Community Center-Program Fees	03/20/15	\$1,122.00
Lincoln Equipment, Inc.	S1259438	Community Center-Safety Equipment	03/09/15	\$39.98
Lincoln Equipment, Inc.	S1259609	Community Center-Safety Equipment	03/12/15	\$172.98
Melinda Esau	111	Community Center-Program Fees	04/07/15	\$364.80
Nancy Roberts	5	Community Center-Program Fees	03/30/15	\$99.00
Nancy Roberts	6	Community Center-Program Fees	03/23/15	\$72.00
Office Depot	759329850001	Community Center-Office Supplies	03/09/15	\$105.19
Office Depot	759330007001	Community Center-Office Supplies	03/09/15	\$6.67
ProPet Distributors, Inc.	105998	Litter Pick Up Bags	02/24/15	\$984.20
Village Nurseries Wholesale, LLC	215033	Color Order	02/28/15	\$345.03
W.J. Kirk Welding	48397	Cornell Park Backstop Repair	04/01/15	\$173.60
			Total	\$7,130.90

Request For Authorization To Pay Invoices (RFA)
For The Meeting On April 15, 2015
Town of Discovery Bay, D.Bay L&L Park #9 (Ravenswood)
For Fiscal Year's 7/14 - 6/15

<u>Vendor Name</u>	<u>Invoice Number</u>	<u>Description</u>	<u>Invoice Date</u>	<u>Amount</u>
Brentwood Ace Hardware	808/033115	Landscape Maintenance	03/31/15	\$90.32
Comcast	8155400350238372/315	Internet Service	03/22/15	\$56.32
ProPet Distributors, Inc.	105998	Litter Pick Up Bags	02/24/15	\$216.00
W.J. Kirk Welding	48011	Repair Mower	04/01/15	\$435.62
			Total	\$798.26



Town of Discovery Bay

"A Community Services District"

AGENDA REPORT

Meeting Date

April 14, 2015

Prepared By: Rick Howard, General Manager
Submitted By: Rick Howard, General Manager *RH*

Agenda Title

Purchase Emergency Stand-By Generator for Well No. 7

Recommended Action

Authorize purchase of one (1) MULTIQUIP Whisperwatt DCA 300SSCU4i 300KW Portable Generator from Gonneville Inc. in the amount of \$130,342.00 for Well No. 7

Executive Summary

The Town is currently in the final stages of construction on Well No. 7. Well No. 7 is located on Newport Drive. It is anticipated that the Well will be operational later this summer.

In order to provide operational reliability during power outages and in times of emergency, it is necessary to have a dedicated stand-by generator.

The cost of the generator was included in the Bond fund allocation for Well No. 7.

The cost of the generator is \$117,255.00 plus tax (\$9,967.00) and shipping (\$3,120.00) for a total purchase of \$130,342.00. This generator has been discontinued and a newer model is now available. However, pricing for this unit is very competitive due to standing inventory.

This generator has been previously bid as a part of the General Services Administration California Multiple Awards Schedule, or CMAS, and the Town, as a political subdivision of the state can "piggy-back" on that competitive bidding process.

Fiscal Impact:

Amount Requested \$130,342.00 \$1,500,000.00 less Project To Date and Encumbrances of 1,105,971.00 =
Balance \$394,028.81

Sufficient Budgeted Funds Available?: Yes (If no, see attached fiscal analysis)

Prog/Fund # Category: Pers. Optg. Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item

N/A

Attachments

MULTIQUIP Whisperwatt DCA 300SSCU4i 300KW Portable Generator
Gonneville Inc. Proposal

AGENDA ITEM: E-3



DCA300SSCU4i

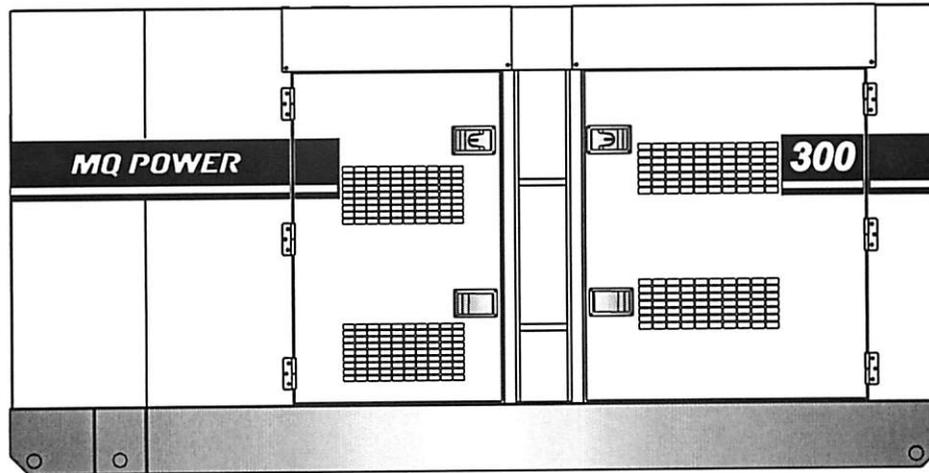
MQ POWER Whisperwatt™ Series

WhisperWatt™ 300

Prime Rating — 240 kW (300 kVA)

Standby Rating — 264 kW (330 kVA)

3-Phase, 60 Hertz, 0.8 PF



STANDARD FEATURES

- Heavy duty, 4-cycle, direct injection, turbocharged, air to air intercooled diesel engine provides maximum reliability.
- Brushless alternator reduces service and maintenance requirements and meets temperature rise standards for Class F insulation systems.
 - Open delta alternator design provides virtually unlimited excitation for maximum motor starting capability.
 - Automatic voltage regulator (AVR) provides precise regulation.
- Electronic governor system maintains frequency to $\pm 0.25\%$.
- Full load acceptance of standby nameplate rating in one step (NFPA 110, para 5-13.2.6).
- Sound attenuated, weather resistant, steel housing provides operation at 75 dB(A) at 23 feet. Fully lockable enclosure allows safe unattended operation.
- Internal fuel tank with direct reading fuel gauges are standard.
- Seven stage powder coat paint provides durability and weather protection.
- Jacket Water Heater (750 watts) for easy starting in cold weather climates (above 0° C).
- Digital engine gauges including oil pressure, water temperature, battery volts, engine speed, and fuel level.
- Analog generator instrumentation including AC ammeter, AC voltmeter, frequency meter, ammeter phase selector switch, voltmeter phase selector switch, and voltage regulator adjustment potentiometer.
- ECU830 microprocessor-based digital generator controller.
 - Remote 2-wire start/stop control.
 - Operational temperature range of -40° to 85° C.
 - High visibility LCD display with heated screen and alphanumeric readout.
 - 50/60 Hz engine speed selection; engine is EPA dual-speed rated.
 - Modbus interface for gauge panel and expansion options.
 - DPF cleaning cycle indication.
- Automatic safety shutdown system monitors the water temperature, engine oil pressure, low coolant, overspeed, and overcrank. Warning lights indicate abnormal conditions.
- Complete power panel. Fully covered; three-phase terminals and single phase receptacles allow fast and convenient hookup for most applications including temporary power boxes, tools and lighting equipment. All are NEMA standard.
- Fuel/water separator. Removes condensation from fuel for extended engine life.
- Simultaneous single and three phase power.
- Battery Switch.
- Emergency Stop Switch. When manually activated, shuts down generator in the event of an emergency.
- EPA emissions certified - Tier 4i emissions compliant.
 - Engine fitted with DOC and DPF.



DCA300SSCU4i

MQ POWER Whisperwatt™ Series

SPECIFICATIONS

Generator Specifications	
Design	Revolving field, self-ventilated Drip-proof, single bearing
Armature Connection	Star with Neutral
Phase	3
Standby Output	264 KW (330 KVA)
Prime Output	240 KW (300 KVA)
3Ø Voltage (L-L/L-N) Voltage Change-Over Bd. at 3Ø 240/139	208Y/120, 220Y/127, 240Y/139
3Ø Voltage (L-L/L-N) Voltage Change-Over Bd. at 3Ø 480/277	416Y/240, 440Y/254, 480Y/277
1Ø Voltage (L-L/L-N) (Voltage Change-Over Bd. at 1Ø 240/120)	N/A
Power Factor	0.8
Voltage Regulation (No load to full load)	±0.5%
Generator RPM	1800
Frequency	60 Hz
No. of Poles	4
Excitation	Brushless with AVR
Frequency Regulation: No Load to Full Load	Isochronous under varying loads from no load to 100% rated load
Frequency Regulation: Steady State	±0.25% of mean value for constant loads from no load to full load.
Insulation	Class F
Sound Level dB(A) Full load at 23 feet	75

Engine Specifications	
Make / Model	Cummins / QSL9-G8
Emissions	EPA Interim Tier 4 Certified
Starting System	Electric
Design	4-cycle, water cooled, direct injection, turbocharged. Charged Air Cooled and EGR.
Displacement	543 in ³ (8.9 liters)
No. cylinders	6
Bore x Stroke	4.49 x 5.71 in. (114 x 145 mm)
Gross Engine Power Output	433 hp (323 kW)
BMEP	321 psi (2213 kPa)
Piston Speed	1707 ft/min (8.7 m/s)
Compression Ratio	16.6:1
Engine Speed	1800 rpm
Overspeed Limit	2070 rpm
Oil Capacity	6.0 gallons (22.7 liters)
Battery	12V 150Ah x 2 (24 V Systems)

Fuel System	
Recommended Fuel	ASTM-D975-No.1 & No.2-D*
Maximum Fuel Flow (per hour)	40 gallons (151 liters)
Maximum Inlet Restriction (Hg)	4.0 in (100 mm)
Fuel Tank Capacity	129 gallons (490 liters)
Fuel Consumption	gph lph
At full load	16.3 61.8
At 3/4 load	14.1 53.3
At 1/2 load	12.0 45.5
At 1/4 load	7.05 26.7

* - Use ultra-low sulfur diesel fuel.

Cooling System	
Fan Load	22.5 hp (16.8 kW)
Coolant Capacity (with radiator)	14.0 gallons (53 liters)
Coolant Flow Rate (per minute)	74 gallons (280 liters)
Heat Rejection to Coolant (per minute)	9310 Btu (6.66 MJ)
Maximum Coolant Friction Head	7.5 psi (51.8 kPa)
Maximum Coolant Static Head	60 feet (18.3 meters)
Ambient Temperature Rating	104°F (40°C)

Air	
Combustion Air	633 cfm (17.94 m ³ /min)
Maximum Air Cleaner Restriction	25 in. H ₂ O (6.25 kPa)
Alternator Cooling Air	2797 cfm (79.0 m ³ /min)
Radiator Cooling Air	12749 cfm (361 m ³ /min)

Exhaust System	
Gas Flow (full load)	1496 cfm (42.3 m ³ /min)
Gas Temperature	913°F (489°C)
Maximum Back Pressure	87.1 in. H ₂ O (21.7 kPa)

Amperage	
Rated Voltage	Maximum Amps
1Ø 120 Volt	666.7 Amps (4 wire)
1Ø 240 Volt	333.3 Amps (4 wire)
3Ø 240 Volt	722 Amps
3Ø 480 Volt	361 Amps
Main Line Circuit Breaker Rating	800 Amps
Over Current Relay Trip Set Point 480V Mode Only	361 Amps

WARRANTY*

Cummins Engine

12 months from date of purchase with unlimited hours.

Generator

24 months from date of purchase or 2000 hours (whichever occurs first).

Trailer

12 months excluding normal wear items.

*Refer to the express written, one-year limited warranty sheet for additional information.

NOTICE

Generator is not intended for use in enclosed areas or where free flow of air is restricted.

Backfeed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device.

Specifications are subject to change without notice.



DCA300SSCU4i

MQ POWER Whisperwatt™ Series

MQ POWER DECIBEL LEVELS

Our soundproof housing allows substantially lower operating noise levels than competitive designs. WhisperWatts are at home on construction sites, in residential neighborhoods, and at hospitals — just about anywhere.

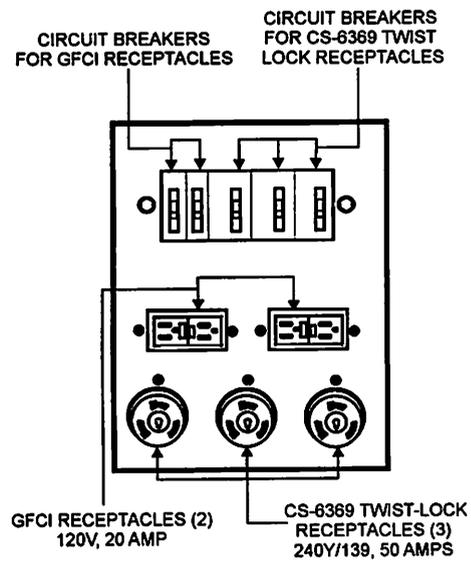
- 90 — Subway / truck traffic
- 80 — Average city traffic
— WhisperWatt at 23 feet
- 70 — Inside car at 60 mph
- 60 — Air conditioner at 20 feet
- 50 — Normal conversation



OPTIONAL GENERATOR FEATURES

- **Battery charger** — provides fully automatic and self-adjusting charging to the generator's battery system.
- **Jacket water heater** — for easy starting in cold weather climates below 0° (1500 watts).
- **Special batteries** — long life batteries provide extra engine cranking power.
- **Spring Isolators** — provides extra vibration protection for standby applications.
- **Trailer mounted package** — highway legal trailer with electric or surge-hydraulic brakes with triple axle configuration. Extra capacity fuel tanks are also available.

GENERATOR OUTPUT PANEL



OPTIONAL CONTROL FEATURES

- **Audible alarm** alerts operator of abnormal conditions.

OPTIONAL FUEL CELL FEATURES

- **Trailer Fuel Tank** — a second fuel cell located in the trailer allows for extended run time.
- **Subbase fuel cells (double wall)** — additional fuel cell for extended runtime operation. Contains a leak sensor, low fuel level switch, and a secondary containment tank. UL142 listed.
- 12 hours of minimum run time.
- 24 hours of minimum run time.

OPTIONAL OUTPUT CONNECTIONS

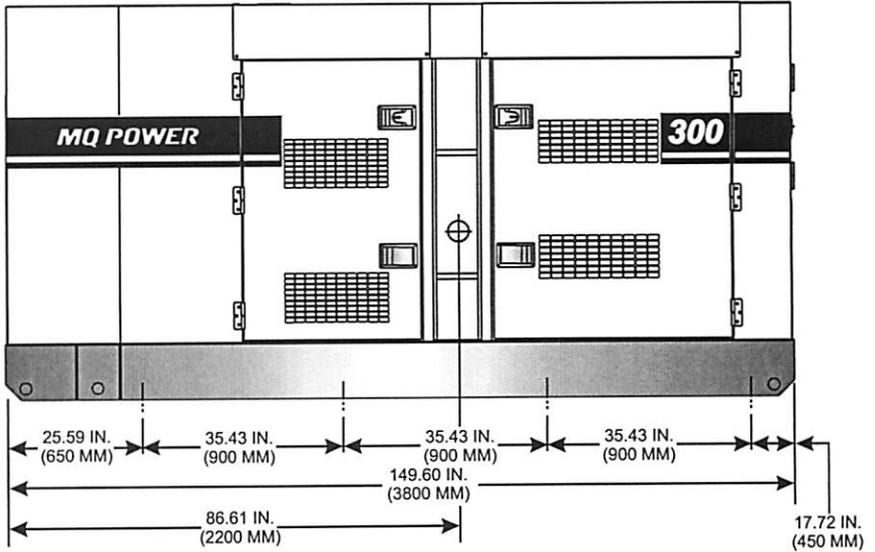
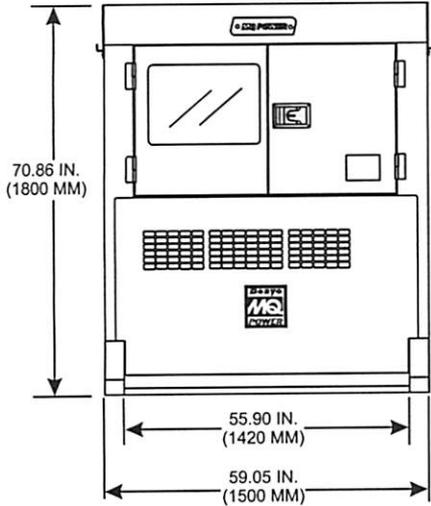
- **Cam-Loks** — provides quick disconnect alternative to bolt-on connectors.
- **Pin and Sleeve Connectors** — provides industry standard connectors for all voltage requirements.
- **Output Cable** — available in any custom length and size configuration.



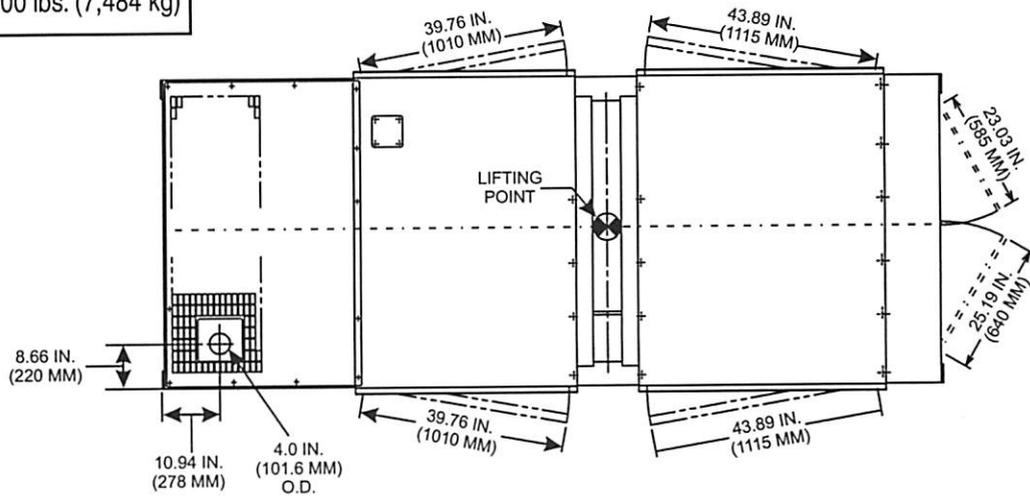
DCA300SSCU4i

MQ POWER Whisperwatt™ Series

DIMENSIONS



Weight	
Dry Weight	8,642 lbs. (3,920 kg)
Wet Weight	9,766 lbs. (4,440 kg)
Max. Lifting Point Capacity	16,500 lbs. (7,484 kg)



Manufactured by Denyo Co.

Your Multiquip dealer is:



MULTIQUIP
 POST OFFICE BOX 6254
 CARSON, CA 90749
 310-537-3700 • 800-883-2551
 FAX: 310-604-3831
 E-MAIL: sales@multiquip.com
 WEBSITE: www.multiquip.com



	Unit Specifications	
Prime Rating	240 kW	300 kVA
Standby Rating	264 kW	330 kVA
Generator RPM	1800	
Voltage - Three Phase	208, 220, 240, 416, 440, 480V Reconnectable	
Voltage - Single Phase	120, 127, 139, 240, 254, 277V Adjustable	
Generator Design	Revolving field, Self-ventilated, Drip-proof, Single bearing	
Voltage Regulation (No Load to Full Load)	±0.5 %	
Power Factor	0.8	
Armature Connection	Star with Neutral	
Excitation	Brushless with AVR	
No. Poles	4-pole	
Frequency	60 Hz	
Frequency Regulation (steady state load)	±0.25 %	
Sound Level (Full Load at 23 ft.)	75 dB(A)	

	Engine Specifications	
Make/Model	Cummins QSL9-G3	
Emissions	EPA Interim Tier 4 Certified	
Starting System	Electric	
Design	4 cycle, water-cooled, direct injection, turbo-charged with air to air after-cooler	
Gross Engine Power Output	bhp	kW
Fuel Tank Capacity	129 gal	43.0 L
Fuel Consumption:		
Full load	19.0 gph	19.0 lph
3/4 load	15.5 gph	58.6 lph
1/2 load	11.1 gph	41.9 lph
1/4 load	5.9 gph	22.4 lph
Coolant Capacity	11.3 gal	43.0 L
Oil Capacity	7.0 gal	26.5 L
Battery	150 Ah x 2 (24V System)	

TRLR325XF Trailer Specifications

Gross Vehicle Weight Rating (GVWR)	18,000 lb 8164.6 kg
Gross Axle Weight Rating (GAWR) (ea.)	10,000 lb 4535.9 kg
Coupler Rating	
Tire Size	235/75R17.5 LR-H
Tire Load Rating (ea.)	6,005 lb 2723.8 kg
Wheel Bolt Pattern	8 x 6.5
Fuel Tank Capacity	300 gal 1135.62 L
Combined Tank Runtime:	
50% Load	36 h
100% Load	26 h
Fits MQ Power Generator Models	DCA250SSI DCA300SSC DCA300SSK

TRLR325XF Dimensions & Weights

Overall Length	234 in 5943.6 mm
Overall Width	96 in 2438.4 mm
Overall Height	33 in 838.2 mm
Operating Weight	
With Fuel	5,990 lb 2,717 kg
Without Fuel	3,860 lb 1,751 kg

Notice: Features and equipment specifications are subject to change without notice.

Visit our [Service & Support Center](#) for:

- **Documentation**
- [Operation and Parts Manuals](#)



Gonneville Inc.

Quotation No. 1503102

To	Town of Discovery Bay CSD	Date	3/10/15
Attn	Virgil Koehne	Tel	925-683-3619
E-Mail	vkoehne@todb.ca.gov	Cell	

Item	Qty	Part #	Description	Price	Extension
1	1	DCA300SSCU4IPB	Generator, 300KVA 3Ph 433hp CumminsTier4i Diesel Engine, 45KW BK	102,017.00	102,017.00
2	1	TRLR325XFH	Trailer DCA300 - 300 gallon fuel cell hydraulic brakes	13,009.00	13,009.00
3	1	EE36264	Pintle Hitch 3 TRLR 300 325 400	65.00	65.300
4	1	CAMLKOK-2KIT	Camlok 2 Set DCA180 220 300 MQP240 (Optional)	760.00	760.00
5	1	MQPHEAT300TKIT	Heater DCA250SSIUC DCA300SSC (Optional)	506.00	506.00
6	1	MQPBCKIT-D	Battery Charger DCA150 180 220 300 240 See BDT (Optional)	898.00	898.300
7	1	Freight	Freight to Discovery Bay	3,120.00	3,120.00

FOB:	Origin	Terms:	Net 30
DVBE #	0000191 - SDVOB	Certification Agency:	OSBCR Exp.10/31/2016
SBE #	0000191	Federal ID:	33-0946522
Cage Code	1TCP0	GSA Contract #	GS-07F-0251L GS-30F-0016Y

Quote prices are good for 60 days for the specific items and exact quantity of items quoted. Changes in the amount of an item ordered may change the price. If you have any questions concerning this quote, please do not hesitate to contact us. We look forward to serving your needs.

Thank You,

Don Gonneville

211 Calle Pintosco, Unit A, San Clemente, CA 92673
 TEL : (949) 248-7297 FAX : (949) 248-0666 www.gonneville.com
 Gonneville Inc is a Service-Disabled Veteran-Owned Small Business



Town of Discovery Bay

"A Community Services District"

AGENDA REPORT

Meeting Date

April 14, 2015

Prepared By: Rick Howard, General Manager
Submitted By: Rick Howard, General Manager *RH*

Agenda Title

Review Urban Water Management Plan

Recommended Action

Review and Comment

Executive Summary

Beginning in 2010, the State of California required all California urban water suppliers to complete an urban Water Management Plan (UWMP). UWMP's are intended to assess a community's historic and current water use projections and compares water supplies with demands over the next 20 years. The UWMP serves as a long-range planning document for water supply and demand and provides an overview of water supply and usage, recycled water and conservation programs.

Every urban water supplier that either provides over 3,000 acre-feet of water annually, or serves more than 3,000 urban connections is required to assess the reliability of its water sources over the 20-year planning horizon, and report its progress on 20% reduction in per-capita urban water consumption by the year 2020, as required in the Water Conservation Bill of 2009 SBX7-7.

In 2010 the Town was in the process of developing the Water Master Plan (WMP), which was completed in 2012. The WMP is a planning document tailored specific to the needs of the Town and used to develop the capital improvement plan. In contrast, the UWMP is a state-mandated water supply planning document that is used by the state to forecast overall growth and water supply needs. The WMP and its data share many of the same components that are necessary to incorporate into the 2010 UWMP (and subsequent updates and plans).

Luhdorff and Scalmanini Consulting Engineers has been developing and preparing the UWMP since early 2014 and has been reviewed by staff.

The plan identifies local water supplies that are necessary to meet future demands, water recycling, as well as TODB's current and planned conservation measures. The UWMP will help ensure that the Town can provide our service area with a reliable supply of high-quality water and meet current and future demands.

The plan is updated every five years and submitted to the California Department of Water Resources (DWR). DWR staff then reviews the submitted plans to make sure they have completed the requirements identified in the Water Code, Sections §10608– 10656, then submits a report to the Legislature summarizing the status of the plans.

After tonight's review and comment by the public and the Board, the draft UWMP will be sent to DWR for a review. Once DWR reviews the plan, they will likely make a number of recommendations and comments. The Plan will then be provided to neighboring agencies for their review and consistency with their plans. Once all of that is complete, the Board will conduct a Public Hearing on the Plan and once completed, the UWMP will be formally submitted to DWR for approval. The entire process is anticipated to take approximately 120 days.

Fiscal Impact:

Amount Requested \$ N/A

Sufficient Budgeted Funds Available?: (If no, see attached fiscal analysis)

Prog/Fund # Category: Pers. Optg. Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item

N/A

Attachments

Draft UWMP

AGENDA ITEM: F-1

DRAFT
2010 URBAN WATER MANAGEMENT PLAN

Town of Discovery Bay Community Services District



*Prepared with Assistance From
Luhdorff & Scalmanini Consulting Engineers*

April 6, 2015

Table of Contents

		Page
Chapter 1	Plan Preparation	1-1
1.1	Introduction.....	1-1
1.2	Coordination	1-1
1.3	Plan Adoption, Submittal and Implementation.....	1-2
 Chapter 2	 System Description.....	 2-1
2.1	Description of Service Area and Agency.....	2-1
2.2	Water System Description	2-1
2.2.1	Water Services	2-2
2.2.2	Water Supply Wells	2-2
2.2.3	Water Treatment Plants and Storage.....	2-3
2.2.4	Water Distribution	2-3
2.3	Climate.....	2-3
2.4	Service Area Population	2-4
 Chapter 3	 System Demand	 3-1
3.1	Baseline Daily Per Capita Water Use	3-1
3.2	Water Use Targets.....	3-3
3.3	Historical Water Deliveries.....	3-4
3.4	Projected Water Deliveries	3-6
3.5	Low Income Residential Water Use	3-7
3.6	Wholesale Water Demand Projections	3-8
3.7	System Losses and Additional Water Uses	3-8
3.8	Total Water Use	3-9
3.9	Water Use Reduction Plan	3-10
 Chapter 4	 System Supplies.....	 4-1
4.1	Water Sources	4-1
4.2	Groundwater	4-2
4.2.1	Geologic Setting and Occurrence of Groundwater	4-2
4.2.2	Hydrogeologic Setting in Discovery Bay	4-4
4.2.3	Groundwater Conditions.....	4-4
4.2.4	Well Yield and Aquifer Characteristics.....	4-6
4.2.5	Groundwater Basin Yield and Monitoring	4-7
4.3	Transfer Opportunities	4-7
4.4	Desalinated Water Opportunities.....	4-7
4.5	Recycled Water Opportunities.....	4-8

4.5.1	Wastewater Collection and Treatment System Description	4-8
4.5.2	Quantity of Available Treated Wastewater	4-9
4.5.3	Recycled Water Current and Potential Future Uses	4-9
4.5.4	Methods to Encourage Recycled Water Use	4-12
4.5	Future Water Projects	4-13
Chapter 5	Water Supply Reliability and Water Shortage Contingency Planning...	5-1
5.1	Water Supply Reliability.....	5-1
5.2	Water Shortage Contingency Planning.....	5-1
5.2.1	Stages of Action.....	5-2
5.2.2	Prohibitions.....	5-3
5.2.3	Consumption Reduction Methods.....	5-4
5.2.4	Penalties.....	5-4
5.2.5	Revenue and Expenditure Impacts During Water Shortages.....	5-5
5.2.6	Other Actions During Catastrophic Reductions	5-5
5.3	Water Quality Impacts on Water Shortage	5-6
5.4	Drought Planning.....	5-7
5.4.1	Water Year Types	5-7
5.4.2	Three-Year Minimum Water Supply	5-8
5.4.3	Measurement for Determining Actual Consumption Reduction	5-8
5.4.4	Water Supply and Demand Assessment	5-9
Chapter 6	Demand Management Measures	6-1
6.1	Overview.....	6-1
6.2	Demand Management Measures Implementation	6-1

Appendices

Appendix A: UWMP Checklist

Appendix B: Notices to Agencies of Public Hearing, and Resolution to Adopt UWMP

Appendix C: Water Conservation Ordinances and Resolutions

C.1 – Water Shortage Contingency Resolution

C.2 – Resolution 2014-11 – Voluntary Water Reduction

C.3 – Ordinance No.25 – Establishing Emergency Drought Regulations

List of Tables

Tables

Table 1-1 (DWR Table 1) Coordination with appropriate agencies.....	1-2
Table 2-1 (DWR Table 2) Population – current and projected.....	2-5
Table 3-1 (DWR Table 13) Base period ranges.....	3-2
Table 3-2 (DWR Table 14) Base daily per capita water use – 10- to 15-year range.....	3-2
Table 3-3 (DWR Table 15) Base daily per capita water use – 5-year range	3-3
Table 3-4 Summary of Baseline Water Use and Targets.....	3-4
Table 3-5 (DWR Table 3) Water deliveries – actual / estimated, 2005.....	3-5
Table 3-6 (DWR Table 4) Water deliveries – actual / estimated, 2010.....	3-5
Table 3-7 Water deliveries – actual / estimated, 2013.....	3-5
Table 3-8 (DWR Table 5) Water deliveries – projected, 2015.....	3-6
Table 3-9 (DWR Table 6) Water deliveries – projected, 2020.....	3-7
Table 3-10 (DWR Table 7) Water deliveries – projected, 2020, 2030, 2035.....	3-7
Table 3-11 (DWR Table 8) Low-income projected water demands.....	3-8
Table 3-12 (DWR Table 9) Sales to other water agencies.....	3-8
Table 3-13 (DWR Table 10) Additional water uses and losses.....	3-9
Table 3-14 (DWR Table 11) Total water use	3-9
Table 4-1 Groundwater Supply Well Information.....	4-1
Table 4-2 (DWR Table 16) Water supplies – current and projected	4-2
Table 4-3 (DWR Table 18) Groundwater – volume pumped.....	4-6
Table 4-4 (DWR Table 19) Groundwater – volume projected to be pumped	4-7
Table 4-5 (DWR Table 21) Current and projected wastewater flows	4-9
Table 4-6 (DWR Table 22) Recycled water – non-recycled wastewater disposal	4-9
Table 4-7 (DWR Table 23) Recycled water – potential future use	4-12
Table 4-8 (DWR Table 26) Future water supply projects	4-13
Table 5-1 (DWR Table 35) Water shortage contingency – rationing stages.....	5-3
Table 5-2 (DWR Table 36) Water shortage contingency – mandatory prohibitions.....	5-3
Table 5-3 (DWR Table 37) Water shortage contingency – consumption reduction methods.....	5-4
Table 5-4 (DWR Table 38) Water shortage contingency – penalties and charges.....	5-5
Table 5-5 (DWR Table 30) water quality impacts.....	5-6
Table 5-6 (DWR Table 27) Basis of water year data.....	5-7
Table 5-7 (DWR Table 28) Supply reliability – historic conditions	5-8
Table 5-8 (DWR Table 31) Supply reliability – current water sources	5-8
Table 5-9 (DWR Table 32) Supply and demand comparison, normal year	5-9
Table 5-10 (DWR Table 33) Supply and demand comparison, single dry-year events	5-9
Table 5-11 (DWR Table 34) Supply and demand comparison, multiple dry-year events	5-10
Table 6-1 Demand Management Measures	6-2

List of Figures

Figures

- Figure 2-1 Existing Water System and Future Developments
- Figure 2-2 Population Growth
- Figure 4-1 Geologic Cross-Section
- Figure 4-2 Hydrograph of Supply Wells
- Figure 4-3 TDS of Supply Wells

List of Abbreviations

CUWCC	California Urban Water Conservation Council
CWC	California Water Code
CDP	census designated place
DMM	demand management measure
DWR	Department of Water Resources
EDU	equivalent dwelling unit
gpcd	gallons per capita per day
gpm	gallons per minutes
gpm/ft	gallons per minute per foot of drawdown
µS/cm	micro-Siemens per centimeter
MCL	maximum contaminant level
MGD	million gallons per day
MGY	million gallons per year
MOU	Memorandum of Understanding Regarding Urban Water Conservation in California
NPDES	National Pollutant Discharge Elimination System
RWQCB	Regional Water Quality Control Board
SBX7-7	Senate Bill SBX7-7, Water Conservation Bill of 2009
TDS	total dissolved solids
TODB	Town of Discovery Bay Community Services District
UV	ultraviolet
UWMP	Urban Water Management Plan
WDR	waste discharge requirements
WTP	water treatment plant
WWTP	wastewater treatment plant
WRCC	Western Regional Climate Center

Chapter 1 Plan Preparation

This chapter introduces the 2010 Urban Water Management Plan for the Town of Discovery Bay Community Services District (TODB) and describes the plan preparation process that included coordination with the public, plan adoption, submittal and implementation.

1.1 Introduction

Urban Water Management Plans (UWMPs) are State-mandated water supply planning documents required by the Department of Water Resources (DWR) to be completed every 5 years by every urban water supplier that has 3,000 or more service connections or supplying 3,000 or more acre-feet of water per year. The Town of Discovery Bay Community Services District prepared this 2010 UWMP to comply with the *UWMP Act (California Water Code Section 10610 et seq.)* and the *Water Conservation Bill of 2009 (SBX7-7)*. The California Department of Water Resources prepared a *Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban water Management Plan (Guidebook)*, which was utilized to ensure this 2010 UWMP complies with the state legislative requirements. Appendix A provides a completed UWMP Checklist per the Guidebook.

The purpose of the UWMP is to direct long-term resource planning to ensure adequate water supplies meet existing and future demands over a 20-year planning horizon and under various drought and water shortage scenarios. Furthermore, with goals set forth in the *Water Conservation Bill of 2009* to reduce urban per-capita water use by 20% by 2020, each urban water supplier must include targets for water supply reduction in the 2010 UWMP. Specifically, the 2010 UWMP must define the urban water supplier's base daily per-capita water use and set water use targets reduction for 2015 and 2020. The 2010 UWMP must also include an evaluation of population growth; water deliveries and uses; water supply sources; efficient water uses, and; water demand management measures (DMMs) with implementation strategy and schedule.

The 2010 UWMPs were due July 1, 2011. TODB is submitting this plan retroactively in order define its base water use and water use targets to comply with the requirements of the State legislature. This 2010 UWMP includes data up to 2013. Finally, as TODB did not submit a 2005 UWMP, this 2010 UWMP was prepared as a new submittal rather than an update.

1.2 Coordination and Public Hearing

California Water Code (CWC) Section 10620(d)(2) requires the urban water supplier to coordinate the preparation of the UWMP with other appropriate agencies in the area to the extent practicable. Furthermore, CWC Section 10642 requires the water supplier to make the Plan

available for public inspection and hold a public hearing. The hearing should include specific discussion of the plan indicating present and proposed future measures, programs, and policies to help achieve the water use reductions and to achieve compliance with both the requirements for the public hearing prior adoption and the public discussion on the suppliers per capita water use reduction goals.

In accordance with the code requirements, TODB will schedule a public hearing to review, consider and changes to, and adopt the 2010 UWMP. At least 60 days prior to the public hearing to review and adopt the UWMP, TODB will notify nearby applicable agencies of the intent to adopt the 2010 UWMP.

Table 1-1 summarizes the coordination effort involved with preparing the TODB 2010 UWMP (as recommended in the DWR Guidelines).

Table 1-1 (DWR Table 1)							
Coordination with appropriate agencies							
Coordinating Agencies ^{1,2}	Participated in developing the plan	Commented on the draft	Attended public meetings	Was contacted for assistance	Was sent a copy of the draft plan	Was sent a notice of intention to adopt	Not involved / No information
Contra Costa Water District					X	X	
East Contra Costa Irrigation District					X	X	
City of Antioch					X	X	
City of Brentwood					X	X	
Diablo Water District					X	X	
Contra Costa County					X	X	
General Public			X		X	X	
<p>¹ Indicate the specific name of the agency with which coordination or outreach occurred.</p> <p>² Check at least one box in each row.</p>							

1.3 Plan Adoption, Submittal and Implementation Process

The DWR Guidebook includes a description the requirements for public participation and Plan adoption. The requirements include the following:

- At least 60 days prior to the public hearing, water suppliers must notify any city or county within which the supplier provides water supplies that the supplier is in the process of preparing their Plan.
- Water suppliers must encourage the involvement of diverse social, cultural, and economic elements of the population within the service area.
- Water suppliers must make the UWMP available for public inspection prior to adoption. Prior to the public hearing, the water supplier must provide public notification of the time and place for the hearing. The water supplier must provide such notification in two publications in a newspaper published once a week or oftener, with at least five days intervening between the respective publication dates.
- If a water supplier makes changes to the UWMP after plan adoption, the supplier must hold another public hearing and have the UWMP readopted.
- A copy of the UWMP adoption resolution must be included in the UWMP.
- The water supplier must provide information on how it will implement the UWMP.
- No later than 30 days after submitting a UWMP to DWR, water suppliers must provide a copy of the UWMP to the California State Library and any city or county within which the supplier provides water supplies and must make the UWMP available for public review during normal business hours

For this 2010 UWMP, TODB will notify applicable agencies listed in Table 1-1, at least 60 days in advance, that a public hearing will be held to review and consider any changes to the draft 2010 UWMP. TODB intends to adopt the draft 2010 UWMP following the public hearing. The final 2010 UWMP will include a copy of the Public Hearing and Board resolution in Appendix B (not yet included).

TODB will post the notice of the public hearing on the TODB homepage on the internet, as well as legal public notices in the newspaper. Copies of the draft Plan will be available at the TODB offices.

During the public hearing, TODB will include specific discussions of the plan indicating present and proposed future measures, programs, and policies to help achieve the water use reductions and publically discuss the per-capita water use reduction goals. At the end of the public hearing, TODB will adopt the 2010 UWMP. If any changes are made after the plan is adopted, TODB will hold another public meeting.

Within 30 days after adoption, TODB will send a copy of the 2010 UWMP along with copies of any changes or amendments and the signed resolution adopting the 2010 UWMP to DWR, the California State Library and Contra Costa County. Within 30 days of submission to DWR,

TODB will make available a copy of the adopted 2010 UWMP for public inspection during normal business hours.

Once the 2010 UWMP is adopted, the Plan will be implemented. In general, the implementation of the elements of this Plan involves continued water supply monitoring (groundwater levels and quality); monitoring of water demand; enacting water shortage contingency plans when necessary in response to water shortages, and; implementing water conservation and tracking demand reduction through the strategies and schedules described for DMMs.

Chapter 2 System Description

2.1 Description of Service Area and Agency

The Town of Discovery Bay is located adjacent to the Sacramento-San Joaquin Delta (Delta) and is approximately twenty miles due west of the city of Stockton and six miles southeast of the city of Brentwood off State Highway 4. The Town of Discovery Bay is a largely residential community with limited commercial development constructed within a network of man-made lakes and channels that are connected to the Delta. The levees and waterways of Discovery Bay are managed and maintained by Reclamation District 800, the California Department of Boating and Waterways, and the US Army Corps of Engineers. The system is defined by relatively flat topographies with mean sea level elevations ranging from 5 feet to 15 feet across the entire system.

The Town of Discovery Bay is an unincorporated community that operates as a Community Services District which is governed by a 5-member elected Board of Directors that was formed in 1997. Prior to the formation of the Community Services District, the developments were privately owned and the water system was managed by the Sanitation District No. 19. The first developments in the Town of Discovery Bay were constructed in the early 1970's as a resort community. The Town has evolved into a year-around community of approximately 15,000 residents.

The Discovery Bay Community Services District (TODB) serves as Town of Discovery Bay's local government tasked with providing and maintaining the municipal public water (water supply, treatment and distribution) and wastewater systems (collection, transmission and treatment) to approximately 6,000 homes and businesses. TODB also manages the Town's common landscaping and recreation zones. TODB Board has no land-use or zoning authority; however, TODB advises the County of Contra Costa on decisions related to municipal services not provided by the TODB.

2.2 Water System Description

TODB public water system derives 100% of its water supply from five active groundwater supply wells. A sixth ground water well is currently under construction. Raw water from the wells is delivered and treated at two water treatment plants (WTPs), known as Newport WTP and the Willow Lake WTP. Storage tanks are located at each plant to provide operational equalization and reserves for fire safety. Booster facilities draw upon the storage tanks to provide the flow and pressure required in the interconnected distribution system. Each water treatment plant is equipped with standby generators to operate the facilities in the event of prolonged

power outages. The distribution system consists of a network of piping that varies in material, age and sizes ranging in diameter from 6-inch through 20-inch. The system operates as one pressure zone.

Figure 2-1 provides a map of the water system including service area boundary, water supply sources, water treatment plants and distribution piping. Details of the water system are discussed below.

2.2.1 Water Services

Discovery Bay is predominately a residential community, with some commercial, institutional and irrigation water uses. There is no industrial water use. Through 2013, TODB serves potable drinking water to approximately 15,000 people via approximately 5,842 service connections. Of those, 5,683 are residential services, 28 are commercial and institutional, and 98 are landscape irrigation (e.g. parks, greenbelts, etc.) and 33 designated as “other”. The “other” services are for drip systems along sidewalks and driveways to control soil moisture and the shrinkage and swelling of clay soils.

TODB prepared a 2010 Water Master Plan¹ that covered a ten year planning horizon. It was assumed that growth in that period would be driven by housing development plans from local developers. There was also minor infill of vacant undeveloped lots within existing neighborhoods. TODB defined the areas of growth and provided the estimated schedule for completion based on input from the developers. The future developments would build-out the existing service area boundary with some growth planned to occur outside the existing service area boundary.

The 2010 Water Master Plan projected a growth of 1,385 service connections by the year 2020. In preparing this UWMP, TODB provided updates to the historical number of service connections reported in the 2010 Water Master Plan. Based on those updates, TODB had a total of 5,842 service connections in 2010, and will have 7,230 service connections at the projected build-out by 2020.

2.2.2 Water Supply Wells

The five active groundwater supply wells deliver groundwater to the treatment plants through dedicated raw water pipelines (Wells 1B, 2, 4A, 5A and 6). Wells 1B, 2 and 6 deliver water to Willow Lake WTP, and Wells 4A and 5A deliver water to the Newport WTP. Well 2 is the oldest active well, constructed in 1971. Wells 1B, 4A and 5A were constructed between 1991

¹ 2012, Luhdorff & Scalmanini Consulting Engineers, Discovery Bay 2010 Water Master Plan

and 1996. Well 6 is the newest well, constructed in 2009. A sixth well (Well 7) will be brought online in 2015.

The capacity of all existing wells combined is approximately 7,900 gallons per minute (gpm). After Well 7 is brought online, the combined well capacity will be approximately 9,900 gpm. As presented in the 2010 Water Master Plan, Well 7 is being constructed per TODB's Capital Improvement Plan as a backup supply well to meet current and future water demands with the largest producing supply well offline.

2.2.3 Water Treatment Plants and Storage

In the early 2000s, TODB constructed two centralized water treatment facilities for removal of iron and manganese in the groundwater. The facilities are known as the Willow Lake Water Treatment Plant (WTP) and Newport WTP. The treatment process is the same at both plants. Raw water is chemically oxidized and filtered through manganese-greens and media filters, and treated water stored in onsite reservoirs. Booster pumping stations draw from the reservoirs to maintain a pressurized water distribution system. Each treatment plant is equipped with a 750-kilowatt, diesel-powered backup generator, which can provide power to the entire treatment plant in the event of power outages.

The combined treatment capacity of both water treatment plants is 6,550 gpm. The combined storage capacity of the system is 2 million gallons. A new 850 gpm filter will be added to the Willow Lake WTP and an additional 0.275 million gallons will be added at Newport WTP per TODB's Capital Improvement Plan in order to meet water demands projected to 2020.

2.2.4 Water Distribution

The distribution system has approximately 46 miles of mainline piping ranging in size from 6-inch to 16-inch. A majority of the system is 8-inch pipe, with 12-inch and 16-inch arterial mains. The system contains approximately 18 miles of asbestos cement (AC) pipe, 28 miles of PVC pipe, and about 1 mile of cast iron and ductile iron pipe. The 2010 Water Master Plan indicated that future subdivisions would add approximately 6.5 miles of pipeline to the system.

2.3 Climate

The climate in Discovery Bay consists of cool and humid winters and hot and dry summers, characteristic of the areas surrounding the Sacramento-San Joaquin River Delta. Though climate data is not recorded in Discovery Bay, historic climate data sets are available for nearby cities. The City of Antioch, located approximately 20 miles northwest of Discovery Bay, has

temperature records from 1955 on the Western Regional Climate Center (WRCC)² website. Average temperatures range from 37 to 91 °F, but the extreme low and high temperatures have been 18 and 117 °F, respectively. The rainy season typically starts in November and ends in March, with some rain events occurring as early as September or as late as May. During the rainy season, average monthly precipitation is about 2 to 3 inches, and monthly precipitation has ranged from 0 to 9 inches. Average annual precipitation is 13 inches, and a maximum of 28 inches.

High water demand for TODB is correlated with the hot and dry summers. Private landscape irrigation, including lawn irrigation, is a significant component of the higher summer water demands. Additionally, there is an unquantified vacation and tourist population that rises during the summer for recreation. Water demands are lowest during the winter months.

2.4 Service Area Population

The service area population methods presented in the DWR Guidelines³ were applied to estimate TODB's service area population. The service area population estimates below are also used in calculating the baseline per capita water use (see Chapter 3).

In accordance with DWR Guidelines, the U.S. Census Bureau data was used as the basis for population estimates. The U.S. Census Bureau has identified Discovery Bay as a "census designated place" (CDP), which is a designation for populated areas that resemble incorporated places but are not incorporated under the laws of the state. The Census Block Map for Discovery Bay CDP overlaps the TODB Service Area Boundary. Accordingly, TODB falls into Category 1 of the DWR Guidelines, where the actual distribution area overlaps more than 95-percent with the Census Block Map estimates for the community. Therefore, the U.S. Census data for Discovery Bay CDP is directly used to determine service area population of TODB during baseline compliance years.

In 2000, the population reported by the U.S. Census Bureau⁴ was 8,981, and in 2010 the reported population was 13,352. This equates to an average growth rate of approximately 5-percent per year in that 10-year period. The total water service connections for 2000 and 2010 were approximately 4,100 and 5,842 respectively. This results in a persons-per-connection ratio of 2.19 and 2.29 for 2000 and 2010 census data, respectively, or an average of 2.24 persons-per-connection.

² Western Regional Climate Center website, Cooperative Climatological Data Summaries, NOAA Cooperative Stations, Antioch Pump Plant 3, California: <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0232>

³ 2011, Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan, Department of Water Resources

⁴ 2000 and 2010 Census, U.S. Census Bureau website, Discovery Bay CDP: <http://quickfacts.census.gov/qfd/states/06/0619339.html>

TODB has historically conducted growth and planning studies based on increases in water service connections for proposed developments. The 2010 Water Master Plan identified a build-out of the existing service area by 2020 with a total of 7,230 service connections. Using the average ratio of 2.24 persons-per-connection, this correlates to an estimated population of 16,180 people by 2020. This indicates that from 2010 to 2020 the estimated average growth rate will be approximately 2-percent per year.

The planned future developments identified in the 2020 build-out are ones that have taken significant steps in the local planning and environmental review process and the schedule for those developments has been defined. Furthermore, the permitting process and environmental documentation for some of the developments have taken up to 10 years to complete.

Local considerations were made to assess growth beyond the 2020 build-out. There are other potential developable lands surrounding the TODB that developers have shown interest in pursuing. The County of Contra Costa General Plan⁵ has identified a need for additional housing in the unincorporated areas of East Contra Costa County. However, the only available lands are in ecologically sensitive areas (e.g., in several feet of peat, marinas, and waterways). Based on the time it has taken current developments to undergo environmental, permitting and public review, and based on economic considerations, TODB forecasts that any additional new but yet to be permitted developments pursued beyond 2020 would not result in new housing being occupied until 2030 at the earliest.

Accordingly, the population estimates in this plan forecast a lull between 2020 and 2030, to account for the planning time required for any future developments. Beginning in 2030 it is assumed that future housing projects will have been completed, and service area population will continue to grow at the historic average annual growth rate of 3.3-percent for TODB.

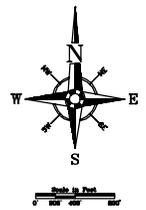
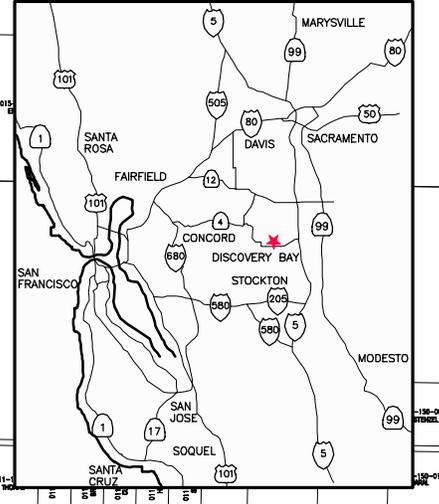
The population growth of TODB to 2035 is shown in Figure 2-2 (see end of chapter) and in Table 2-1, below.

	2010	2013	2015	2020	2025	2030	2035	Data source
Service area population¹	13,352	13,575	14,930	16,180	16,180	16,180	19,000	See Note 2

¹ Service area population is defined as the population served by the distribution system.
² U.S. Census Bureau 2000 and 2010, and TODB service connection estimates

⁵ 2013, Contra Costa County General Plan 2020 Update

LOCATION MAP

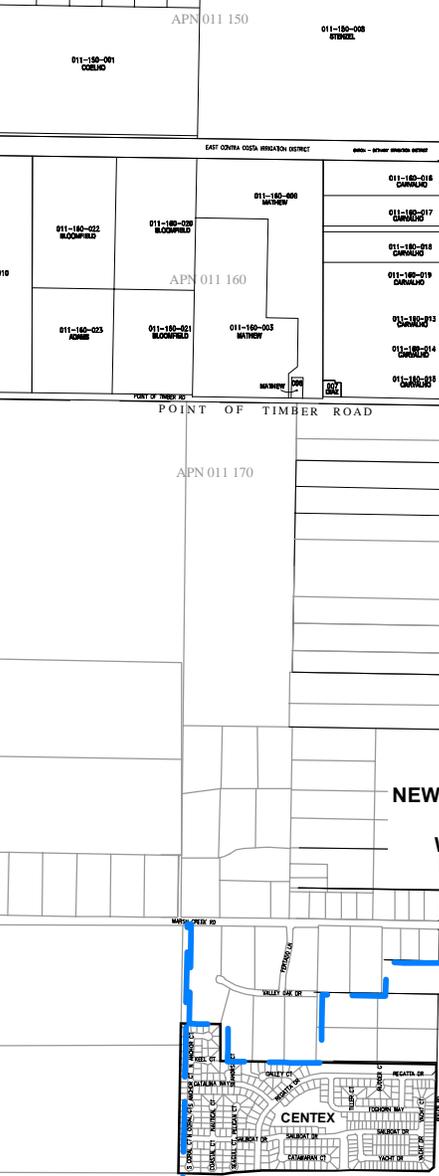
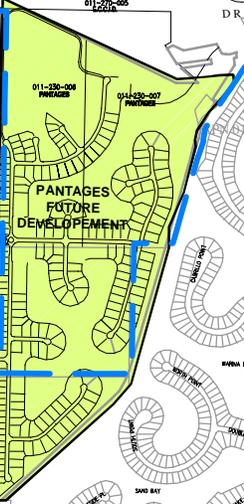
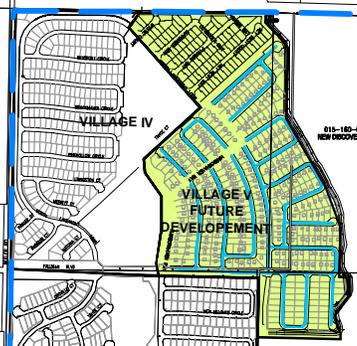


EXISTING SERVICE AREA BOUNDARY (PER CONTRA COSTA COUNTY GIS)

INDICATES FUTURE DEVELOPMENT PROJECTED FOR 2020 PLANNING HORIZON.

NOTES:

- 1.) SERVICE AREA BOUNDARY WILL HAVE TO BE MODIFIED TO INCLUDE PANTAGES AND NEWPORT POINT FUTURE DEVELOPMENTS.
- 2.) PIPING THAT IS SHOWN FOR FUTURE DEVELOPMENTS IS THEORETICAL.



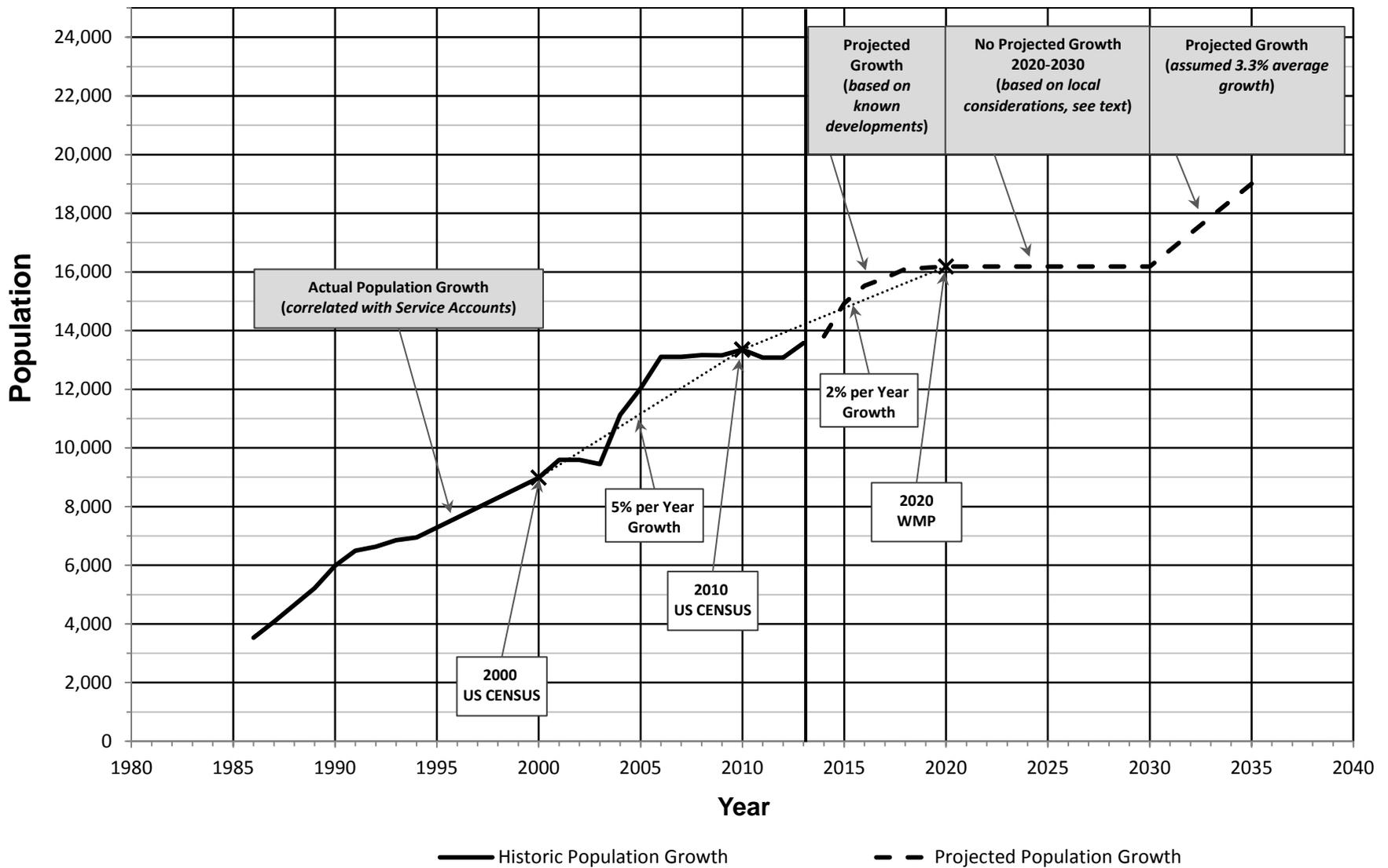


Figure 2-2
Population Growth
Discovery Bay CSD

Chapter 3 System Demands

Chapter 3 provides the baseline water use, water reduction goals, and projected water use in accordance with the UWMP Act and the Water Conservation Bill of 2009 (SBX7-7).

3.1 Baseline Daily Per Capita Water Use

As stated in the Water Conservation Bill of 2009, Senate Bill SBX7-7 (SBX7-7), an urban retail water supplier shall include in its 2010 Urban Water Management Plan the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use. The plan should include the basis for determining those estimates and references to supporting data.

Baseline water use and targets were determined using *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use*⁶, developed by DWR for consistent implementation of SBX7-7. The baseline and target water use presented in this chapter were developed individually by TODB, not regionally with other agencies.

The baseline daily per-capita water use (i.e. baseline water use) serves as the basis for setting the target water use reduction goals by 2015 and 2020. To establish baseline water use, water suppliers must define a 10 year or 15 year base (i.e., baseline) period for water use. The 15-year baseline period applies to a water supplier that met at least 10 percent of its 2008 retail water demand through recycled water, which TODB did not and therefore a 10-year base applies to TODB. Table 3-1, below, summarizes the baseline periods for TODB.

Calculation of the baseline water use is based on the estimated service area population and the gross water use for each year in the base period. Chapter 2 provided estimates of the service area population. Gross water use was identified using TODB production records from its water production facilities. The water system, as described in Chapter 2, consists of two central water treatment plants that receive raw water from groundwater supply wells. The system does not have imported water nor does it provide wholesale water. Historically, the system has not used recycled water; however, a recent project will be adding recycled water use into the system for industrial purposes. Therefore, historical records of water production from the water treatment plants represent the gross water use of the system.

⁶ February 2011, Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, California Department of Water Resources

Table 3-1 (DWR Table 13)			
Base period ranges			
Base	Parameter	Value	Units
10- to 15-year base period	2008 total water deliveries	1,328	MGY
	2008 total volume of delivered recycled water	0	MGY
	2008 recycled water as a percent of total deliveries	0	percent
	Number of years in base period ¹	10	years
	Year beginning base period range	2001	
	Year ending base period range ²	2010	
5-year base period	Number of years in base period	5	years
	Year beginning base period range	2003	
	Year ending base period range ³	2007	

¹If the 2008 recycled water percent is less than 10 percent, then the first base period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first base period is a continuous 10- to 15-year period.

²The ending year must be between December 31, 2004 and December 31, 2010.

³The ending year must be between December 31, 2007 and December 31, 2010.

The historical records of gross water use and service area population are shown in Table 3-2. The daily per-capita water use is calculated for each baseline year. The baseline daily per capita water use was calculated using the average of the per-capita water use for each baseline year, and is approximately 261 gallons per capita per day (gpcd). Table 3-2, below, summarizes the service area population, gross water use, the calculated daily per capita water use for each baseline year, and the baseline daily per capita water use. Units are expressed in million gallons per day (mgd) and gallons per capita per day (gpcd).

Table 3-2 (DWR Table 14)				
Base daily per capita water use — 10- to 15-year range				
Base period year		Distribution System Population	Daily system gross water use (mgd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar Year			
Year 1	2001	9,594	2.2411	234
Year 2	2002	9,594	2.3315	243
Year 3	2003	9,447	2.5233	267
Year 4	2004	11,125	2.8356	255
Year 5	2005	12,034	3.2986	274
Year 6	2006	13,106	3.2466	248
Year 7	2007	13,110	3.6219	276
Year 8	2008	13,164	3.6384	276
Year 9	2009	13,155	3.5123	267
Year 10	2010	13,352	3.5790	268
Baseline Daily Per Capita Water Use¹				261

3.2 Water Use Targets

Each water supplier must establish a water use reduction target for 2020, referred to as the urban water use target. There are four methods available to water suppliers for determining the urban water use target.

- Method 1: 80% pf Baseline Daily Per Capita Water Use
- Method 2: Performance Standards
- Method 3: 95% of Regional Target
- Method 4: Water Savings (provisional)

Due to lower regional targets, and predominant residential uses in TODB, Method 1 was selected as the most appropriate. The target is set equal to 80-percent of the baseline water use. Using this method, the urban water use target is 209 gpcd by the year 2020 (i.e., a 20-percent reduction in 10 years).

In accordance with SBX7-7, water suppliers must confirm that the 2020 water use target meets the legislation’s minimum water use reduction requirements by comparing the water use target determined above (209 gpcd) to the calculated water use for a 5-year baseline period, determined as follows. Table 3-3, below, summarizes the daily per-capita water use in the 5-year base period. Following the DWR guidelines, the minimum required reduction in water use is calculated as 95-percent of the 5-year base water use, which is approximately 251 gpcd. The water use target (209 gpcd) is less than the minimum required (251 gpcd), and therefore no adjustment is needed to the water use target.

Table 3-3 (DWR Table 15)				
Base daily per capita water use — 5-year range				
Base period year		Distribution System Population	Daily system gross water use (mgd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar Year			
Year 1	2003	9,447	2.5233	267
Year 2	2004	11,125	2.8356	255
Year 3	2005	12,034	3.2986	274
Year 4	2006	13,106	3.2466	248
Year 5	2007	13,110	3.6219	276
Baseline Daily Per Capita Water Use¹				264

¹Add the values in the column and divide by the number of rows.

Finally, water suppliers must set an interim water use target to achieve by 2015, which will be reported and verified in the 2015 UWMP. The interim water use target is used to demonstrate progress being made toward achieving water reduction goals. The interim water use target by 2015 is calculated as the average of the baseline water use and the water use target, which is approximately 235 gpcd. Table 3-4 summarizes the DBCD baseline water use, water use target and interim water use target.

Table 3-4: Summary of Baseline Water Use and Targets

Water Use Baseline and Targets	Baseline (2000-2010)	Interim Water Use Target (2015)	Water Use Target (2020)
Daily Per Capita Water Use (gpcd)	261	235	209

3.3 Historical Water Deliveries

In preparing a UWMP, water suppliers must quantify, to the extent records are available, past and current water use and projected water use, identifying the uses among water use sectors. There are three main sources of data that were used to identify the water use in each sector for TODB. The first source is annual reporting by TODB to DWR and CDPH. The second source is the TODB 2010 Water Master Plan. The third source is recent updates from TODB, which, in preparation of this document, provided corrections to the number of service connections reported in the 2010 Water Master Plan. The data reported in this 2010 UWMP also include the most recent year of data (2013) so that the document is “current” with the date of submittal.

Tables 3-5, 3-6 and 3-7 below provide the estimated number of service connections and water use in each sector for the years 2005, 2010 and 2013. The deliveries in each year are broken into metered and non-metered. TODB categorizes customer sectors as follows: single family residential, multi-family residential, commercial/institutional, landscape, and other. Water deliveries estimated to these services does not account for water losses, which are discussed in Section 3.7.

Ninety eight percent of all services in the TODB system are residential. In 2005, a majority of the system was non-metered and residents were billed on a flat-rate system. TODB started adding customer meters on residential services in 2008. As of 2009, approximately 30-percent of all residential services were metered. TODB intends to become fully metered by the conclusion of Fiscal 2017-18 in order to provide the basic tool for tracking water demand and demand management effectiveness, and also to comply with State requirements to be fully metered not later than January 1, 2025.

For the purposes of reporting non-metered water deliveries, estimates were based off of metered customer water use for each customer sector. The water deliveries do not account for water system losses and other water uses, which are provided in Table 3-13 and include a significant potable water use at the wastewater treatment plant (WWTP). Tables 3-5, 3-6 and 3-7 provide estimates of the metered and non-metered water deliveries for years 2005, 2010 and 2013, respectively.

Table 3-5 (DWR Table 3)					
Water deliveries — actual / estimated, 2005					
	2005				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume (MGY)	# of accounts	Volume (MGY)	Volume (MGY)
Single family	0	0	5,300	910	910
Multi-family	0	0	0	0	0
Commercial Institutional	14	9	10	7	16
Landscape	29	91	17	53	145
Other	7	0	0	0	0
Total	50	100	5,327	970	1,070

Table 3-6 (DWR Table 4)					
Water deliveries — actual / estimated, 2010					
	2010				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume (MGY)	# of accounts	Volume (MGY)	Volume (MGY)
Single family	1,878	312	3,580	615	927
Multi-family	0	0	224	29	29
Commercial Institutional	30	21	3	2	23
Landscape	72	103	24	34	138
Other	8	1	62	7	8
Total	1,988	437	3,893	687	1,124

Table 3-7					
Water deliveries — actual / estimated, 2013					
	2013				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume (MGY)	# of accounts	Volume (MGY)	Volume (MGY)
Single family	1,978	342	3,481	598	940
Multi-family	0	0	224	29	29
Commercial Institutional	25	33	3	4	37
Landscape	87	152	11	19	171
Other	14	0	19	0	0
Total	2,104	526	3,738	650	1,176

3.4 Projected Water Deliveries

The projected water deliveries provided in this section are based on population estimates (Table 2-1) and the objective to meet per-capita water use targets for 2015 and 2020 (Table 3-4). The deliveries plus the system losses (discussed in Section 3.7) make the total projected gross water use.

From 2010 to 2015, the population is projected to increase by approximately 12-percent. This was correlated by an increase in services connections by 2015. Water deliveries are projected to increase by approximately 4-percent from 2010 to 2015. TODB projects reductions in per capita water use through previous and ongoing water conservation efforts. In addition, TODB will be completing a recycled water project in early 2015 at the WWTP that will offset approximately 28 MGY of potable water use, which are currently categorized as system losses (discussed further below in Section 3.7 System Losses and Additional Water Uses). The combination of water conservations (discussed in Chapter 6) and the WWTP recycled water project (discussed in Chapter 4) will enable TODB to meet the interim per-capita water use target by 2015 of 235 gpcd.

Table 3-8 provides the projected water deliveries in 2015.

Table 3-8 (DWR Table 5)					
Water deliveries — projected, 2015					
	2015				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume (MGY)	# of accounts	Volume (MGY)	Volume (MGY)
Single family	2,789	424	3,481	529	953
Multi-family	0	0	224	25	25
Commercial Institutional	40	32	3	2	35
Landscape	89	135	11	17	151
Other	14	1	19	2	3
Total	2,932	592	3,738	575	1,167

Table 3-9 provides the projected water deliveries in the year 2020. From 2015 to 2020 the population is estimated to increase by approximately 8-percent. This was correlated by an increase in services connections by 2020. In contrast, water deliveries from 2015 to 2020 are projected to decrease slightly (by less than 1-percent). The water reductions are based on water conservation measures (discussed in Chapter 6) that will be implemented. The largest reductions are anticipated to come from retrofitting meters on all un-metered services, establishing conservation pricing, and reducing pipeline leakage by replacing water mains.

Table 3-9 (DWR Table 6)					
Water deliveries — projected, 2020					
	2020				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume (MGY)	# of accounts	Volume (MGY)	Volume (MGY)
Single family	6,814	947	0	0	947
Multi-family	224	23	0	0	23
Commercial Institutional	58	47	0	0	47
Landscape	101	145	0	0	145
Other	33	3	0	0	3
Total	7,230	1,164	0	0	1,164

Table 3-10 provides the projected water deliveries for the years 2025, 2030 and 2035. Water services are projected based on the project population beyond 2020. As discussed in Chapter 2, no growth is anticipated to occur between 2020 and 2030 based on local environmental and permitting considerations. The combination of water deliveries and water losses (i.e. gross water use) beyond 2020 are anticipated to meet the per-capita water use target of 209 gpcd.

Table 3-10 (DWR Table 7)						
Water deliveries — projected 2025, 2030, and 2035						
	2025		2030		2035	
	metered		metered		metered	
Water use sectors	# of accounts	Volume (MGY)	# of accounts	Volume (MGY)	# of accounts	Volume (MGY)
Single family	6,814	947	6,814	947	7,910	1,099
Multi-family	224	23	224	23	350	37
Commercial Institutional	58	47	58	47	72	58
Landscape	101	145	101	145	120	172
Other	33	3	33	3	33	3
Total	7,230	1,164	7,230	1,164	8,485	1,368

3.5 Low-Income Residential Water Use

Water suppliers must include in the UWMP an estimate of projected water use for lower income households as defined in Section 50079.5 of the Health and Safety Code. The estimate must be based on the housing element needs identified in the general plan for the water supplier’s service area. TODB does not have direct information pertaining to lower income households served, or

planned to be served in future developments in the service area. The Contra Costa County General Plan identified low-income housing needs in designated locations in the County; however, those needs were not designated specifically in Discovery Bay. The 2010 US Census reports that 6.3-percent of the population in Discovery Bay is below the poverty. For the purposes of the UWMP, projected water deliveries to low-income households is assumed to be 6.3-percent of total water deliveries.

Low Income Water Demands	2015	2020	2025	2030	2035
Single-family residential	60	60	60	60	69
Multi-family residential	2	1	1	1	2
Total	62	61	61	61	72

3.6 Wholesale Water Demand Projections

TODB does not provide wholesale water to other agencies, and does not anticipate wholesale water sales in the future.

Water distributed	2005	2010	2013	2015	2020	2025	2030	2035
N/A	0	0	0	0	0	0	0	0
Total	0							

3.7 System Losses and Additional Water Uses

Additional water uses are presented in Table 3-13. The two additional water uses not shown in Tables 3-5 through 3-10 are: 1) potable water uses at the wastewater treatment plant (WWTP); and, 2) unaccounted system losses (e.g. pipeline leakage, hydrant flushing and WWTP). The water system production is equal to the sum of the water deliveries (Tables 3-5 through 3-10) and the additional water losses.

The WWTP is estimated to use approximately 28 MGY of potable water in wastewater treatment processes. This is part of the baseline water use. TODB is constructing a recycled water project at the WWTP that will eliminate the need for potable water. The project will be completed in

early 2015 and will result in a savings in water production and reduction of the per-capita water use by the system.

Other unaccounted system losses are attributed to flushing programs, pipe breaks and pipe leakage. System losses are estimated to range from 7-12% of total production. TODB is preparing to make water main upgrades and enhance the capabilities of leak detection and repair, which will reduce water losses based upon the quantity and age of pipe planned to be replaced.

Table 3-13 (DWR Table 10)								
Additional water uses and losses								
Water use¹	2005	2010	2013	2015	2020	2025	2030	2035
Saline barriers	0	0	0	0	0	0	0	0
Groundwater recharge	0	0	0	0	0	0	0	0
Conjunctive use	0	0	0	0	0	0	0	0
Raw water	0	0	0	0	0	0	0	0
WWTP water use	28	28	28	0	0	0	0	0
Recycled water (WWTP use)	0	0	0	28	28	28	28	28
System losses	106	154	99	109	66	66	66	77
Total	134	182	127	137	94	94	94	105

¹Any water accounted for in Tables 3-5 through 3-10 are not included in this table.

3.8 Total Water Use

Total water use is the sum of water deliveries to each customer category, WWTP water use, and future recycled water use at the WWTP and water system losses. Table 3-14 provides total water use.

Table 3-14 (DWR Table 11)								
Total water use								
Water Use	2005	2010	2013	2015	2020	2025	2030	2035
Total water deliveries (from Tables 3-5 to 3-10)	1,070	1,124	1,176	1,167	1,164	1,164	1,164	1,368
Sales to other water agencies (from Table 3-12)	0	0	0	0	0	0	0	0
Additional water uses and losses (from Table 3-13)	134	182	127	137	94	94	94	105
Total	1,204	1,306	1,303	1,304	1,258	1,258	1,258	1,473

3.9 Water Use Reduction Plan

TODB is not an urban wholesale water supplier. Therefore, it is not required to provide an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions in wholesale water.

TODB implements water conservation management tools to maximize water resources. See Chapter 6 for information on water reduction plan for TODB as a retail water supplier.

Chapter 4 System Supplies

Chapter 4 describes TODB water supplies with descriptions of water sources, limitations, water quality and potential opportunities for recycled water.

4.1 Water Sources

TODB's water supply is provided from a series of five production wells. Groundwater pumped from the wells occurs in the Tracy Subbasin of the greater San Joaquin Valley Groundwater Basin. The groundwater basin is not adjudicated and DWR has not identified or projected the basin to be in overdraft. TODB has no other current sources of water or any surface water rights.

TODB maintains well facilities based on meeting the maximum day demand of its system with the largest well source offline, in accordance with State of California Code of Regulations, Title 22 California Waterworks Standards. TODB is in the process of constructing a new water supply well (Well #7) to provide redundant backup supplies to meet current and future maximum day demands with the largest well out-of-service.

Table 4-1, below, presents the existing production well information:

**Table 4-1
Groundwater Supply Well Information**

	Well 1B	Well 2	Well 4A	Well 5A	Well 6
WELL INFO					
Drilling Date	1995	1971	1996	1991	2009
Well Diameter (inch)	16"	12"	16"	16"	18"
Well Depth (ft)	350'	348'	357'	357'	360'
Top Screen Interval	271'/289'	245'/335'	307'/347'	261'/291'	270'/295'
24-hr Specific Capacity	10 gpm/ft	11 gpm/ft	23 gpm/ft	21 gpm/ft	28 gpm/ft
PUMP INFO					
Pump Type	Submersible	Oil Lube	Submersible	Water Lube	Submersible
Installation Date	2003	2003	2001	2004	2010
Pump Setting Depth (ft)	260'	220'	180'	240'	250'
Column Diameter (inch)	12"	8"	12"	10"	12"
Bowl Manufacturer	Byron Jackson	Goulds	Flowserve	Floway	Flowserve
Impeller Model	13MQH	11CHC	13MQH	14DKH	14EMM
Number of Stages	3	4	3	3	3
Motor Horsepower	150 HP	100 HP	150 HP	200 HP	150 HP
Well Control	Willow Tanks	Willow Tank	Newport Tanks	Newport Tanks	Willow Tanks
Capacity	1,500 gpm	800 gpm	1,800 gpm	1,800 gpm	2,200 gpm

TODB’s projected water supplies are summarized in Table 4-2 and are discussed in more detail within this chapter. There is no wholesale water, surface water, exchanges, or desalinated water projected as future TODB supply sources. Projections of recycled water use are based on potential projects discussed in Section 4.5.

Water Supply Sources	2010	2013	2015	2020	2025	2030	2035
Supplier-produced groundwater	1,306	1,303	1,276	1,230	1,230	1,230	1,445
Supplier-produced surface water	0	0	0	0	0	0	0
Transfers in	0	0	0	0	0	0	0
Exchanges In	0	0	0	0	0	0	0
Recycled Water	0	0	28	28	28	28	28
Desalinated Water	0	0	0	0	0	0	0
Total	1,306	1,303	1,304	1,258	1,258	1,258	1,473

4.2 Groundwater

4.2.1 Geologic Setting and Occurrence of Groundwater

Discovery Bay is located in eastern Contra Costa County in the northwestern San Joaquin River Valley portion of the Great Valley geomorphic province of California. The province is characterized by the low relief valley of the north-flowing San Joaquin River and the south-flowing Sacramento River, which merge in the Delta region just north of the community draining westward to the Pacific Ocean.

To the west of Discovery Bay, the Coast Range province consists of low mountains of highly deformed Mesozoic and Cenozoic marine sedimentary rocks. These thick marine rocks extend eastward below the Great Valley where they are the targets for gas exploration.

Overlying the marine rocks is a sequence of late Cenozoic (Miocene, Pliocene, and Pleistocene) non-marine sedimentary deposits. Small areas of surface exposures of these deposits occur along the edge of the Coastal Range. These beds dip moderately to the east and extend below the San Joaquin Valley. In the subsurface, the nature of these deposits is poorly known, but they are believed to be dominated by fine-grained clays, silts, and mudstones with few sand beds. The lower portion of these deposits may be in part equivalent to the Miocene-Pliocene Mehrten Formation along the east side of the Great Valley. The Upper portion of Pliocene and Pleistocene age may be equivalent to the Tulare Formation along the west side of the San Joaquin Valley to the south, and the Tehama Formation of the Sacramento Valley to the north. It is believed these deposits extend from about 400 feet to 1,500-2,000 feet below the San Joaquin River. Water quality from electric logs is difficult to interpret, but the quality appears to become brackish to saline with depth.

Late Cenozoic (Pleistocene and Holocene; 600,000 years to present) sedimentary deposits overlie the older geologic units. These deposits are largely unconsolidated beds of gravel, sand, silts, and clays. The deposits thicken eastward from a few tens of feet near the edge of the valley to about 400 feet at the Contra Costa County line. West of Discovery Bay, the deposits are characterized by thin sand and gravel bands occurring within brown sandy silty clays and are believed to have formed on an alluvial fan plain fed from small streams off the Coastal Range to the west. The alluvial plain deposits interbed and interfinger with deposits of the fluvial plain to the east. The fluvial deposits consist of thicker, more laterally extensive sand and gravel beds of stream channel origin interbedded with flood plain deposits of gray to bluish sandy to silty clays. Discovery Bay overlies the fluvial plain area of eastern Contra Costa County. Groundwater supply in Discovery Bay is extracted for supply from these deposits to a depth of about 350 feet.

The regional geologic setting is shown on the San Francisco-San Jose 1° by 2° quadrangle (Wagner and others, 1990). Detailed surface geologic maps of the Coast range in this area include Davis and Goldman (1958), Brabb and others (1971), and Dibblee (1980 a, b, c). Subsurface characterization of the marine rocks beneath the San Joaquin Valley can be found in oil and gas field summaries produced by the California Division of Oil and Gas (1982), and Thesken and Adams (1995). General geologic descriptions and histories of these marine rocks are contained in Bartow (1991), and Bertoldi and others (1991). Because of their marine origin, highly consolidated nature, and presence of saline water, the Mesozoic and tertiary marine rocks are not a source of potable water supply in the region.

A regional study of the thickness of the Tertiary-Quaternary non-marine sedimentary deposits was made by Page (1974) and evaluations of the depth to base of fresh water by the California State Water Project Authority (1956) and Berkstresser (1973). Regional studies of the Sacramento-San Joaquin Valley groundwater basin were performed by Bertoldi and others (1991), and Page (1986). The United States Geological Survey (USGS) compiled water quality information that covers the area in a series of reports (Keeter 1980; Sorenson 1981; and Fogelman 1982). California Department of Water Resources (DWR, 1967) covers the groundwater resources of the San Joaquin County to the east. Local water agencies including TODB participated in a groundwater resources study of eastern Contra Costa County (Luhdorff & Scalmanini Consulting Engineers, 1999). The east Contra Costa County area is also under a groundwater management plan (Diablo Water District, 2007), which was also prepared by Luhdorff & Scalmanini. Luhdorff & Scalmanini also conducted a study of groundwater resources pertaining directly to Discovery Bay (1993) and a water master plan (2010).

4.2.2 Hydrogeologic Setting in Discovery Bay

The hydrogeology of Discovery Bay is illustrated through a geologic cross section on Figure 4-1. The cross section depicts water wells that are the source of supply for the TODB water system.

The deepest sand unit encountered in water wells in Discovery Bay is below about 350 feet and is interpreted as the uppermost, older non-marine deposits of largely fine-grained silt and clay with thin, fine sand interbeds. Water quality appears to be poor to brackish in this unit.

Overlying units are comprised of Pleistocene alluvium of generally thick beds of sand and gravel with a thin clay interbed. These are probably stream channel deposits of a northward flowing ancestral San Joaquin River. This is the main production aquifer completed in all TODB supply wells (see Aquifer A on Figure 4-1).

Overlying Aquifer A is a thick sequence of grayish to bluish silt and clay with thin inter beds of sand. This unit, which confines the production zone, appears to represent deposition on a floodplain with the main stream channels probably further east. The thin sand appears to represent flood-sprays of sand spread out on to the flood plain.

Another aquifer unit, labeled Aquifer B on Figure 4-1, occurs above about 140 feet below ground surface and consists of a thinner sand and gravel bed. Again, these appear to be stream channel deposits. However, Aquifer B has been found to contain brackish to saline water, which must be sealed off to protect water quality of the supply source in Aquifer A and avoid corrosion of the well casing.

Overlying Aquifer B is a sequence of gray to brown silt and clay beds with some thin sand beds. These beds appear to be either floodplain deposits or possibly distal alluvial plain deposits from the west.

4.2.3 Groundwater Conditions

Groundwater conditions that are relevant to the Discovery Bay water system are discussed below in terms of water levels and water quality.

Groundwater Levels

Groundwater level data are available since the late 1980s when Discovery Bay was developed. Since that time, TODB has conducted a monitoring program to aid in sustainable groundwater management. Figure 4-2 is a hydrograph showing water level trends using data obtained from TODB supply wells. The hydrograph highlights drought periods and pumpage. The trends in pumpage correspond to population growth rates.

Early water well driller reports indicate that before significant groundwater pumping occurred, static levels in Discovery Bay were near sea level. At this elevation, depth-to-water was about 10 feet below ground surface. With the onset of pumping and initial growth, the static level in production wells exhibited seasonal variations between 10 and 40 feet below ground surface (see Figure 4-2). During this period, pumpage increased from about 300

million gallons per year (MGY) in 1987 to about 800 MGY by 2001. Between 2001 and 2008, pumpage increased to 1,300 MGY. After 2008, pumpage leveled off as a result of the national economic downturn and water levels since 2008 have exhibited stable to rising trends. Water level measurements in fall 2014 were higher than the last year of the 2007-09 statewide drought.

The stability in groundwater levels in recent dry years indicates that groundwater pumpage is sustainable at current usage by TODB. To ensure future sustainability, TODB is a participant with other regional water users in seeking to form a Groundwater Sustainability Agency under the Sustainable Groundwater Management Act of 2014. In accordance with the legislative act, groundwater users shall develop a groundwater sustainability plan or alternative that achieves sustainable management of the resource.

Groundwater Quality

Groundwater quality from TODB supply wells meets all California primary drinking water standards. The groundwater does not meet secondary standards for manganese and exceeds the drinking water maximum contaminant limit (MCL) of 0.050 mg/L for that constituent. With manganese removal treatment instituted, manganese has been eliminated as a water quality issue.

Groundwater also is hard and high in total dissolved solids (TDS) concentration, but does not exceed the upper MCL (1,000 ppm) for TDS. Because of the depth of the primary aquifer (see Aquifer A in Figure 4-1) and intervening clay layers, source protection is achievable with appropriate annular seals in the well structure. As a result, none of the wells have exhibited anthropogenic sources of contamination such as volatile or semi-volatile organic contaminants that are often found in urbanized settings.

The most important water quality concern for the well sources in Discovery Bay is the brackish to saline water that occurs in Aquifer B overlying the main completion targets of the supply wells (see Figure 4-1). Historic wells in Discovery Bay experienced failure due to improper sealing of wells through the saline Aquifer B. This led to rapid corrosion of well casings and cross-contamination of the drinking water source by saline water. At present, Well 5A exhibits evidence of cross-flow and the well is operated under strict protocol to mitigate potential cross flow between Aquifers A and B. TDS in Well 5A recently raised to anomalously high levels on the order of 1,500 ppm (a future Well 8 will be added if Well 5A is deemed inadequate). The other wells exhibit stable levels of TDS with time as shown in Figure 4-3.

In the absence of chronic downward trends in water levels or degraded water quality, the state of TODB’s groundwater supply is considered sustainable and does not exhibit any characteristics of unsustainability as defined under the 2014 Groundwater Sustainable Management Act.

4.2.4 Well Yields and Aquifer Characteristics

Specific capacities of TODB supply wells vary from less than 10 to over 30 gallons per minute per foot of drawdown (gpm/ft). At these magnitudes, the Discovery Bay supply wells can be equipped to pump at capacities up to 2,200 gpm. Historic testing indicate that the primary production aquifer has a transmissivity ranging from about 50,000 to 100,000 gallons per day per foot and a storativity that is consistent with a confined system. Aquifer parameter estimates provide a basis for evaluating well performance and appropriate spacing of future wells to minimize mutual pumping interference.

Proper maintenance and early identification of degradation in well yields are important activities for a system that relies entirely on well water as a source. In 2007, Discovery Bay instituted a biannual program to test the well facilities, which included quantification of specific capacity. Through this program, specific capacity testing is used to schedule rehabilitation programs and identify signs of structural problems. Each testing event is documented with a report discussing changes since the last reporting period and recommendations for preventative or remedial work to sustain source capacity. Since structural problems may be forewarned by increasing salinity (i.e., because of the presence of shallow brackish water), water quality testing is an integral part of the biannual testing.

The volume of water pumped from the groundwater supply 2006 through 2013 is provided in Table 4-3. Historically, all water used has come from the groundwater basin.

Table 4-3 (DWR Table 18)							
Groundwater — volume pumped (MGY) *							
Basin name(s)	Metered or Unmetered	2006	2007	2008	2009	2010	2013
San Joaquin Basin	Metered	1,185	1,322	1,328	1,282	1,306	1,303
Total groundwater pumped		1,185	1,322	1,328	1,282	1,306	1,303
Groundwater as a percent of total water supply		100%	100%	100%	100%	100%	100%

*Based on metered water production records. All water produced derived from groundwater wells.

The volume of water projected to be pumped from the groundwater supply is provided in Table 4-4. Starting in 2015, TODB will obtain 28 MGY of water as reclaimed water used onsite at the wastewater treatment plant (discussed in more detail below).

Basin name(s)	2015	2020	2025	2030	2035
San Joaquin Basin	1,276	1,230	1,230	1,230	1,445
Total groundwater pumped	1,276	1,230	1,230	1,230	1,445
Percent of total water supply	97.9%	97.8%	97.8%	97.8%	98.1%

*Projected groundwater pumping based on projected water demand, less the future WWTP recycled water source.

4.2.5 Groundwater Basin Yield and Monitoring

Discovery Bay overlies the northwestern portion of the Tracy Subbasin, which is one of sixteen subbasins in the San Joaquin Valley Groundwater Basin as designated by the California Department of Water Resources (Bulletin 118, 2003 Update). The Tracy Subbasin boundaries are defined by the Mokelumne and San Joaquin Rivers on the north; the San Joaquin River on the east; and the San Joaquin-Stanislaus County line on the south. The western subbasin boundary is defined by the contact between the unconsolidated sedimentary deposits and the rocks of the Diablo Range (DWR, 2004).

The reliability of future groundwater supply for Discovery Bay is based on an assumption that the yield of groundwater system is sufficient to sustain current and future pumping. As indicated above, water level and water quality data indicate stable groundwater conditions at current levels of pumping and TODB is taking measures to sustainably manage future growth in accordance with the Sustainable Groundwater Management Act of 2014.

4.3 Transfer Opportunities

TODB does not participate in transfer or exchange programs and does not have any planned in the future.

4.4 Desalinated Water Opportunities

TODB does not plan to build desalinated water plants and there are no opportunities for the development of a desalinated water plant for future water supplies.

4.5 Recycled Water Opportunities

This section provides information on recycled wastewater and its potential for use as a water resource in the service area.

TODB owns and operates a community wastewater collection, treatment and solids disposal facilities. The information in this section was provided by TODB in coordination with the wastewater engineering consultant, Herwit Engineering, and from information provided in the TODB 2010 Wastewater Master Plan⁷.

4.5.1 Wastewater Collection and Treatment System Description

Wastewater is collected and conveyed to the wastewater treatment plant (WWTP) by a network of gravity sewer mains and force mains. There are fifteen sewage pumping stations within the Discovery Bay sewage collection system that deliver sewage from the developments to the overall wastewater treatment plant, which is located on the north and south sides of Highway 4 and directly southeast from the Discovery Bay community.

The WWTP currently produces a disinfected secondary effluent that is discharged to Old River. The WWTP consists of an influent pump station, influent screening, secondary treatment facilities using oxidation ditches, and ultraviolet (UV) disinfection prior to discharge into Old River. The WWTP average daily flow in 2010 was approximately 1.75 million gallons per day (MGD). The facilities are permitted by the Regional Water Quality Control Board (RWQCB) to treat and discharge to Old River under specific waste discharge requirements (WDRs).

The facilities include a solids handling system for the residual sludge or biosolids developed in the wastewater treatment plant. Solids handling facilities consist of waste activated sludge (WAS) pumping systems, a small aerobic digester, two sludge lagoons, a belt press dewatering facility, and four active solar sludge dryers. The solids handling system currently uses approximately 28 million gallons per year (MGY) of potable water through a 4-inch water service connection to the WWTP.

Table 4-5 provides the current and projected wastewater flows for TODB.

⁷ 2013, Stantec Consulting Services Inc., The Town of Discovery Bay Community Services District Wastewater Treatment Plant Master Plan

Table 4-5 (DWR Table 21)						
Current and Projected Wastewater Flows (MGY)						
Type of Wastewater	2010	2015	2020	2025	2030	2035
Wastewater collected & treated in service area – Average Daily Flow	660	770	880	880	880	1,030
Volume that meets recycled water standards	0	0	880	880	880	1,030

4.5.2 Quantity of Available Treated Wastewater that Meets Recycled Water Standards

Title 22 sets forth the regulations that govern recycled water treatment and uses. There are specific filtration and disinfection requirements to use recycled water in applications such as irrigation of landscaping areas. Currently, the effluent from the WWTP is not treated to meet the requirements of Title 22 for such applications. TODB is planning to construct improvements in 2017 to treat all the effluent to meet the Title 22 requirements for “disinfected tertiary recycled water” in order to comply with the discharge permitting requirements of the National Pollutant Discharge Elimination System (NPDES). When these improvements are made, there will be a treated effluent from the WWTP that meets Title 22 recycled water standards that will be available for use in the water system for recycled water applications (e.g. landscape irrigation) but not for domestic drinking water purposes.

Table 4-6 provides the estimated current and future non-recycled wastewater disposal.

Table 4-6 (DWR Table 22)							
Recycled water — non-recycled wastewater disposal (units in MGY)							
Method of disposal	Treatment Level	2010	2015	2020	2025	2030	2035
Discharged to Old River through secondary effluent lift station	Secondary	660	770	0	0	0	0
Discharged to Old River through future tertiary effluent lift station	Disinfected Tertiary	0	0	880	880	880	1,030
Total		660	770	880	880	880	1,030

4.5.3 Recycled Water Current and Potential Future Uses

Current Recycled Water Project – Onsite Reclaimed Water System

As noted above the effluent does not currently meet Title 22 requirements for recycled water uses in the water system. However, Title 22 allows a restricted use of untreated recycled water onsite at the wastewater treatment plant, provided public access to the recycled water is

restricted. TODB is completing a project in early 2015 that will utilize the secondary effluent from the WWTP in the solids handling process.

Currently, the belt presses and spray nozzles in the solids handling process require a water source that uses approximately 28 MGY of potable water from the system. The actual water requirements vary based on time of year. A baseline flow of approximately 50 gallons per minute (gpm) is required with peak use over 300 gpm during the summer months when the belt presses and the drying process is operating. The maximum capacity of the onsite reclaim water system will be 400 gpm to supply water during peak demand requirements. After completion of this project, potable water will no longer be required in the WWTP processes.

Future Potential Recycled Water Uses

After completion of the tertiary treatment systems in 2017, TODB will have recycled water available for use in the water system. There are potential opportunities for use of recycled water; however, none are being pursued at this time. Potential uses and limitations of recycled water are discussed below, and summarized in table 4-7.

Water quality concerns: Of particular concern with recycled water application to irrigation is the source water quality. Boron and salinity are two important parameters when irrigating for agricultural and landscape purposes. Crops and vegetation have varying levels of tolerance to these parameters (among others); however, it generally starts to be an issue when boron is above 2 parts per million (ppm) or electrical conductivity (EC) is above 2000 micro-Siemens per centimeter ($\mu\text{S}/\text{cm}$). The groundwater wells have boron at approximately 1-2 ppm concentrations, whereas the secondary effluent from the WWTP contains boron ranging from 3-4 ppm. The groundwater wells generally have an EC of around 500 $\mu\text{S}/\text{cm}$, whereas the secondary effluent is 2100 $\mu\text{S}/\text{cm}$. Salinity is known to increase in wastewater due to point-of-use water softeners treating water hardness. Boron and salinity will not be removed in the recycled water, and could pose operational issues if applied to landscape irrigation.

Similar recycled water quality issues are present in other systems. In response to recycled water quality issues it has become common practice to blend recycled water to decrease concentrations, or to cycle between recycled water and potable water to reduce soil column salt loading. For the purposes of assessing recycled water potential in the UWMP, it is assumed irrigation water could only meet half (50%) of its demand from recycled water due to poor water quality issues noted above.

Purple pipe systems: All of the newer developments in TODB (from 1999 and on) are constructed with “purple pipe”, which is dedicated for distribution of recycled water to the system. The older developments do not have a purple pipe system. The purple pipes

can connect to public irrigation services as well as individual residences for landscape needs. It is estimated that at build-out in 2020, approximately 36% of the service area will have purple pipe. The estimated irrigation demand for these areas (residential and public irrigation) is approximately 300 MGY, and approximately half can be served recycled water (150 MGY) due to operational considerations with water quality.

Those developments with purple pipe are located on the opposite side of the service area from the wastewater treatment plant. Connecting the purple pipe systems to the WWTP would require a 5-mile transmission, likely to be a 12-inch diameter pipe through congested utilities and a highway crossing. It is estimated that construction costs for such a project is on the order of \$4-6 million. Based on this conceptual assessment, the project would likely serve up to 150 MGY, which equates to the amount of water used by 770 equivalent dwelling units (EDU). In comparison, a typical groundwater supply well in TODB can serve twice as many EDU (approximately 1,500 EDU) and cost half as much to construct (approximately \$2 million). A recycled water pipeline is not being pursued due to cost-to-benefit, and given the current outlook of groundwater appears to be sustainable; however, the project could become more economically feasible if grant funding were available to supplement the cost and will be considered further by TODB.

Other potential applications: Other potential uses for recycled water is irrigation in the Discovery Bay golf course or in the adjacent agricultural fields, neither of which is currently supplied water by the TODB system. Therefore supplying recycled water to these would not reduce the per-capita water use of TODB. The golf course is part of an HOA that has surface water rights for irrigation. Agricultural lands surrounding TODB are irrigated with surface and groundwater. TODB may still considered delivering recycled water to the golf course or agricultural fields as a benefit to regional water supplies even though it would not reduce the per-capita water use in the TODB system.

Groundwater recharge is another alternative for the recycled water use. As discussed above, TODB's groundwater supply is from a confined aquifer system and could not be replenished from a surface recharge. Injection would be the only alternative for recharge, which has limited cost-to-benefit considering the high costs for delivery, construction, permitting and operational complexities associated with injection.

Table 4-7 (DWR Table 23)							
Recycled water — potential future use (units in MGY)							
User type	Description	Feasibility	2015	2020	2025	2030	2035
Agricultural irrigation	Non-customer uses	Pending further investigation	0	0	0	0	0
Landscape irrigation ¹	Purple Pipe in newer developments	Technically feasible, high cost for transmission	0	0	0	0	150
Golf course irrigation	Non-customer uses	Pending further investigation	0	0	0	0	0
Wildlife habitat	N/A	N/A	0	0	0	0	0
Wetlands	N/A	N/A	0	0	0	0	0
Industrial reuse	N/A	N/A	0	0	0	0	0
Groundwater recharge	N/A	No identified needs	0	0	0	0	0
Seawater barrier	N/A	N/A	0	0	0	0	0
Geothermal/Energy	N/A	N/A	0	0	0	0	0
WWTP use	Onsite reclaim water system	Will be completed in March 2015	28	28	28	28	28
Total			0	0	0	0	178

¹Includes parks, schools, cemeteries, churches, residential, and commercial and public facilities

4.5.4 Methods to Encourage Recycled Water Use

The most feasible uses of recycled water include the onsite uses at the WWTP, irrigating in the system using the existing purple pipe network, golf course irrigation and nearby agricultural irrigation. The latter two are not part of TODB potable water demand and would not reduce per-capita consumption for TODB; however, those may still be pursued as a benefit to other surface and groundwater uses outside of TODB under a groundwater sustainability plan. Furthermore, as discussed above, irrigation uses within the system using the existing purple pipe are likely to only be pursued further if grant funding is identified for such a project.

4.5.5 Plan for Optimizing Use of Recycled Water

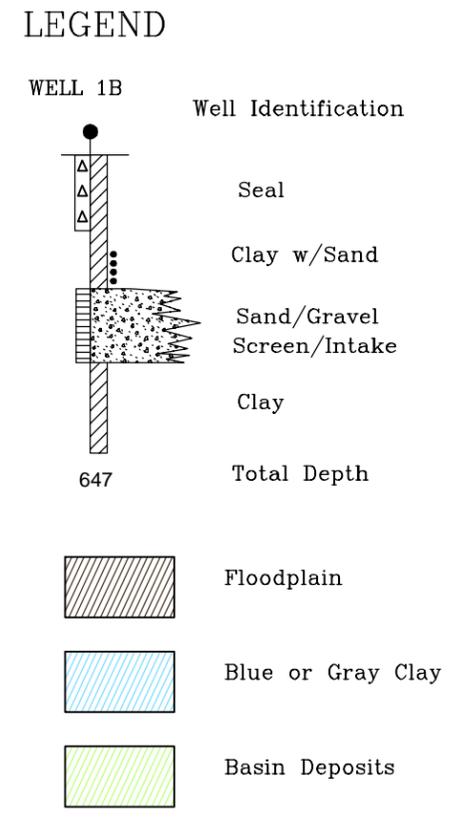
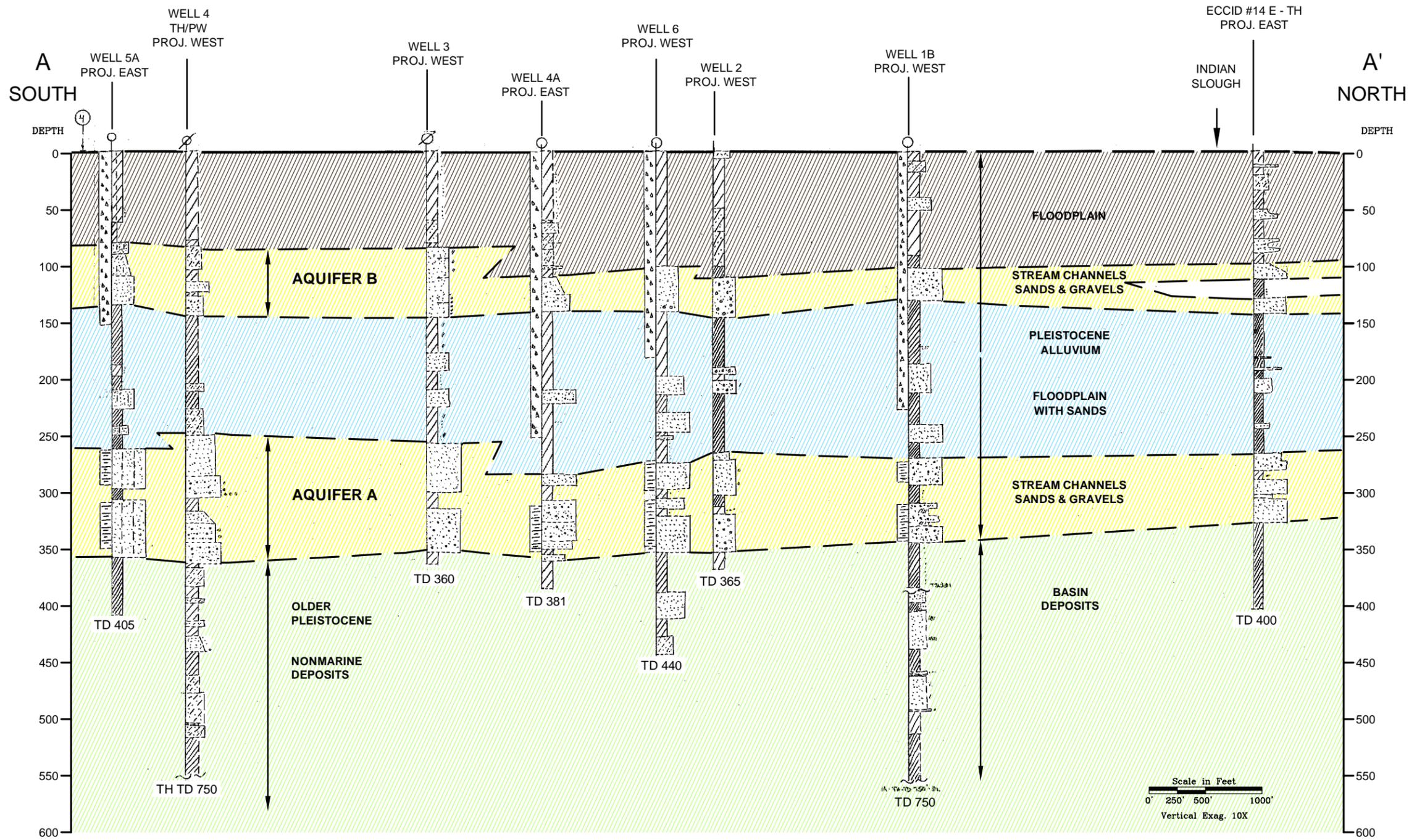
Given the conclusions of limited current recycled water use and uncertainty with the viability of future recycled water use, there is no current plan to optimize recycled water nor is there a separate master plan for recycled water beyond the information presented above.

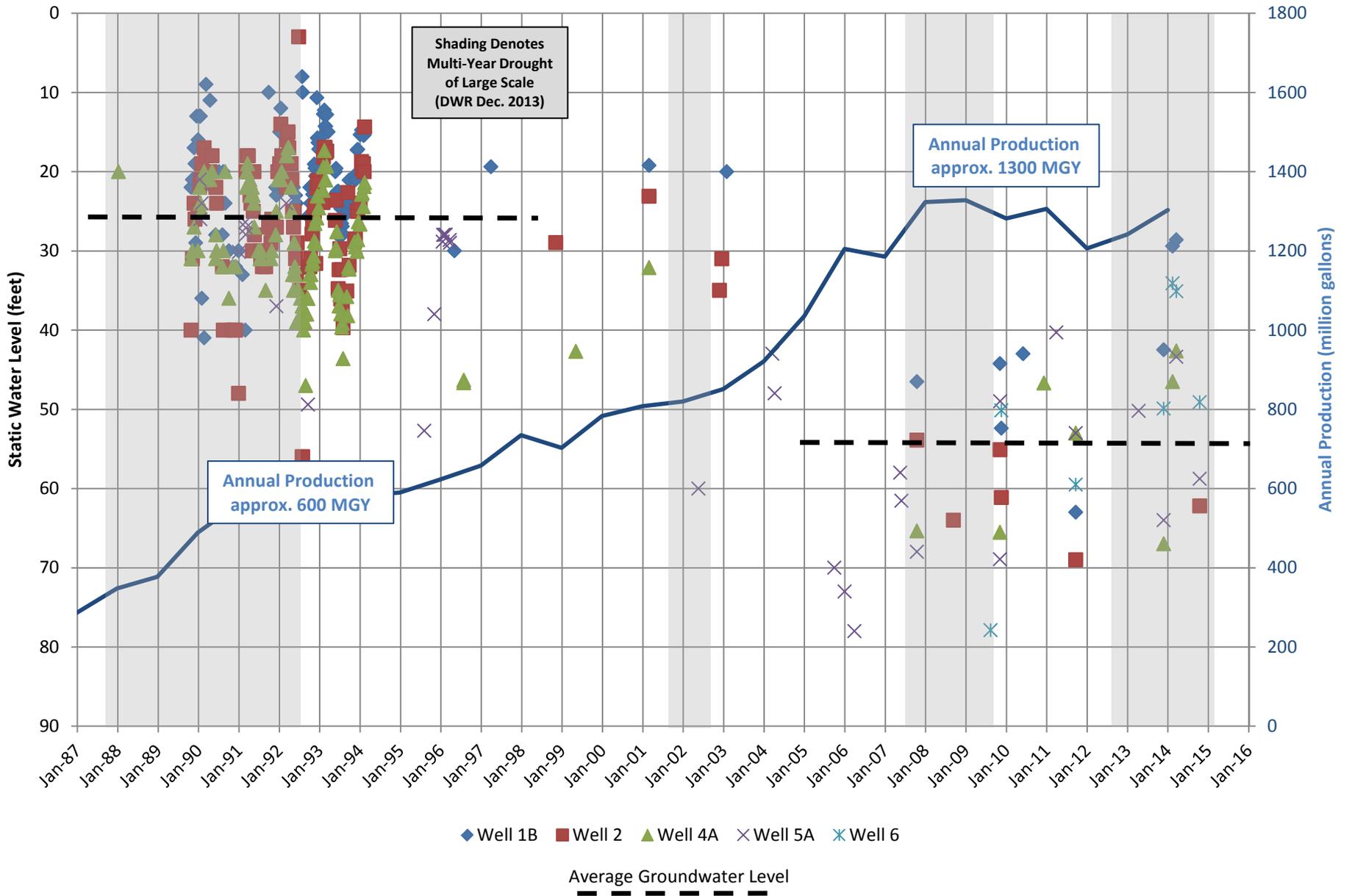
4.6 Future Water Projects

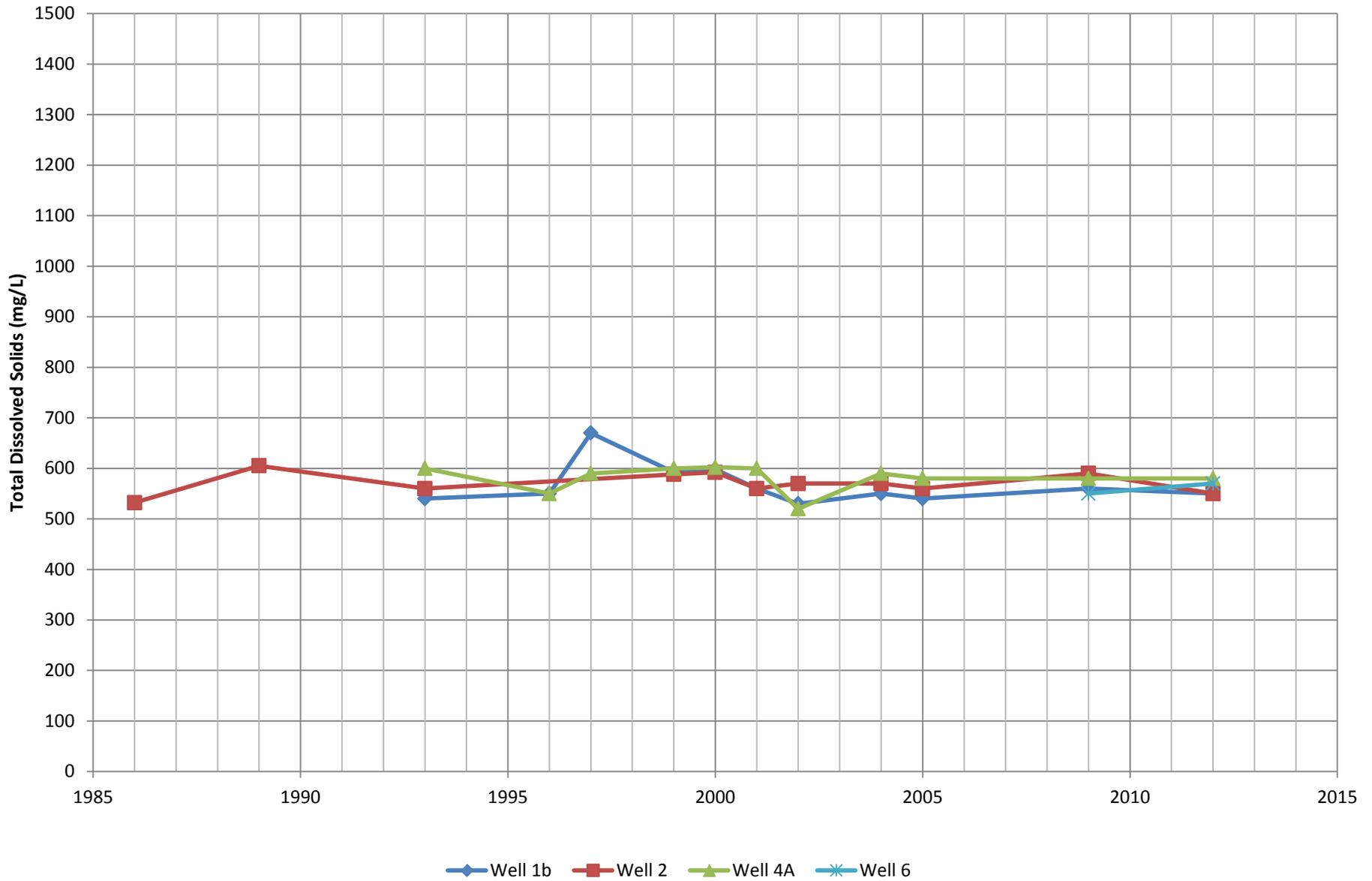
TODB's future water supply projects were identified in the Capital Improvement Program developed in the 2010 Water Master Plan. The projects involve new facilities and upgrades to facilities to meet current and projected water demand and replacement of aging infrastructure. None of the water projects are required to address supplies for average, single-dry, or multiple-dry years. Table 4-8 provides a summary of the water-related projects in the TODB Capital Improvement Program.

Table 4-8 (DWR Table 26) Future water supply projects			
Project name	Projected start date	Projected completion date	Impacts to Water Supply Reliability in Average, Single-Dry, and Multiple-Dry Years *
Water Supply Well 7	2014	2015	N/A
Well 8 (contingency replacement)	Unknown	Unknown	N/A
New Filter Unit WLWTP	2016	2016	N/A
New Backwash Tank WLWTP	2016	2016	N/A
New Recycle Pumps WLWTP	2016	2016	N/A
Chemical Room Upgrade WLWTP	2015	2015	N/A
Recycle Pump Replacement NDWTP	2016	2016	N/A
Booster Pump Replacement NDWTP	2016	2016	N/A
Kellogg Creek Crossings – 16" Main	2017	2017	N/A
8-inch main Upgrades	2017	2020	N/A
New Water Storage Tank NDWTP	2015	2016	N/A
Customer Water Meter Retrofits	2015	2017	N/A
Total			

*None of the projects are required to address drought conditions.







Chapter 5 Water Supply Reliability and Water Shortage Contingency Planning

5.1 Water Supply Reliability

TODB uses only groundwater pumped from a portion of the Tracy Subbasin of the greater San Joaquin Valley Groundwater Basin as its source of supply to the water system. The subbasin from which TODB pumps is not considered in overdraft and is sustainably managed through formal cooperation between local water entities. TODB wells have exhibited no evidence of degradation throughout the development history of the water system and groundwater supplies have been reliable through previous and current drought conditions.

TODB is taking measures to ensure the water supply source will remain reliable through uncertainties in the future including environmental factors that might impact availability of water supply, such as prolonged drought or degradation of water quality through natural or anthropogenic causes. TODB is currently coordinating with other local agencies to develop a Groundwater Sustainability Plan in accordance with the Sustainable Groundwater Management Act of 2014 to protect and adaptively manage the groundwater resource.

TODB is also taking measures to mitigate disruptions in supplies from existing groundwater well infrastructure in catastrophic events, such as earthquakes, can be mitigated. TODB operates five existing wells with a sixth well, Well 7, to be brought online in 2015. This will provide redundancy in the system to offset the loss of a well from catastrophic failure or loss in yield due to aging or other mechanisms.

Though the existing groundwater supplies are not considered vulnerable to water shortages, the information contained in this chapter describes measures taken by TODB to mitigate potential water shortages and drought preparedness from uncertain future events or causes.

5.2 Water Shortage Contingency Planning

This section outlines stages of actions that will be implemented by TODB in the event of water supply shortages and emergency preparedness and plans for catastrophic events. A copy of TODB's Draft Water Shortage Contingency Resolution and Water Shortage Contingency Plan, as well as current water reduction ordinances and resolutions, are in Appendix C.

5.2.1 Stages of Action

CWC Section 10632 (a) requires stages of action to be undertaken by the water supplier in response to water supply shortages, including up to a 50-percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.

TODB will implement a four-stage action in response to water supply shortages to comply with State requirements. The stages will be implemented during water supply shortages, or regional drought conditions that may not be directly influencing TODB water supplies. The stage determination and declaration of a water supply shortage will be made by the TODB Board of Directors.

Stage I – This stage is part of an ongoing public information campaign encouraging voluntary water conservation. TODB issued a resolution for voluntary water use in *Resolution 2014-11 – Voluntary Water Reduction* (Appendix C.2). There is little to no water shortage during Stage 1. Although Stage I is ongoing, customers are reminded when a regional single-year drought is occurring, or when TODB has a redundant back-up well offline for repairs, which makes the overall supply system more vulnerable to shortages.

Stage II – This stage would be initiated during moderate water shortage (of up to 15%) and would be the first stage where mandatory conservation and water use prohibitions are enforced. Failure of two groundwater supply wells could cause a moderate reduction in water supply resulting in implementation of Stage II. Stage II would also be implemented during a regional severe drought where water conservation is mandatory but impacts to TODB's groundwater supply wells are negligible or non-existent. During Stage II the Board of Directors will declare prohibitions on water use, in accordance with the *TODB Ordinance No. 25 Establishing Emergency Drought Regulations* (Appendix C.3). This stage is characteristic of the current drought, which is severe throughout the State but has no immediate effects on the TODB groundwater supply.

Stage III – This stage would be initiated during a severe water shortage (15 to 35%), which could be caused by a catastrophic failure of up to three groundwater supply wells. During Stage III, the Board of Directors would adopt a new ordinance providing authority for the General Manager to implement additional prohibitions and consumption reduction methods that would include water rationing if other consumption reduction methods are not effective at reducing demand.

Stage IV – This stage would be initiated during a critical water shortage (35 to 50%), which could be caused by a catastrophic failure of more than three groundwater supply wells. All steps taken in the prior stages would be intensified and production would be monitored daily for compliance with necessary reductions. Residents would be under

water rationing. TODB would be in emergency status to repair and bring online water supply wells.

Table 5-1 lists the four stages of action for the water shortage contingency.

Table 5-1 (DWR Table 35)		
Water shortage contingency — rationing stages to address water supply shortages		
Stage No.	Water Supply Conditions	% Shortage
I - Voluntary	Normal to Minimum – Ex: loss of a redundant well supply	0-5%
II – Mandatory Conservation	Moderate – Ex: Severe drought <u>or</u> catastrophic loss of 2 wells	0-15%
III - Rationing	Severe to Critical – Ex: Catastrophic loss of 3 wells	15-35%
IV – Intense Rationing	Severe to Critical – Ex: Catastrophic loss of 3 or more wells	35-50%

5.2.2 Prohibitions

The CWC Section 10632 (d) requires water suppliers to implement mandatory prohibitions against specific water use practices that may be considered excessive during water shortages. If drought conditions or water shortages warrant mandatory prohibitions (Stage II) TODB will implement the current water shortage emergency response plan, *Ordinance No. 25 Establishing Emergency Drought Regulations* (Appendix C.3). Further mandatory prohibitions will be implemented if warranted based on Stage III or Stage IV conditions. Table 5-2 identifies potential prohibitions that would be enforced during a water shortage emergency.

Table 5-2 (DWR Table 36)	
Water shortage contingency — mandatory prohibitions	
Prohibitions	Stage When Prohibition Becomes Mandatory
Excessive outdoor watering (causing runoff to non-irrigated areas)	II, III, IV
Use of hose without a shut-off nozzle for vehicle washing	II, III, IV
Application of water to driveways or sidewalks	II, III, IV
Use of water in non-circulating fountain or water feature	II, III, IV
Outdoor irrigation beyond the allowed watering schedule	II, III, IV
Uncorrected plumbing leaks	III, IV
Washing cars	III, IV
Watering lawns/landscapes or filling outdoor water features	III, IV

5.2.3 Consumption Reduction Methods

CWC Section 10632 (e) requires the water supplier to implement consumption-reduction methods during the most severe stages of water shortage that are capable of reducing water use by up to 50%. TODB would implement the water consumption–reduction methods shown on Table 5-3, below. Some of the methods are on-going and are part of the TODB water conservation efforts addressed in the Demand Management Measures.

Table 5-3 (DWR Table 37) Water shortage contingency — Proposed consumption reduction methods		
Consumption Reduction Methods	Stage When Method Takes Effect	Projected Reduction (%)
Demand Reduction Program	All stages	10-20%
Water conservation kits	All stages	10-20%
Education programs	All stages	10-20%
Voluntary rationing	All stages	0-20%
Mandatory prohibitions	II, III, IV	10-20%
Apply flow restrictions to customers	III, IV	35-50%
Water shortage pricing	III, IV	10-50%
Apply penalties for excessive water use	II, III, IV	10-50%
Restrict water use for only priority uses	III, IV	10-50%
Mandatory water rationing, per capita allotment	IV	20-50%

5.2.4 Penalties

CWC Section 10632 (f) requires a water supplier to penalize or charge for excessive use, where applicable. In accordance with the TODB Ordinance No. 25, when a water shortage emergency is declared, the General Manager may issue a Notice of Violation to any customer that fails to comply with the conditions of the ordinance. After one notice has been issued further violations shall be punishable by a fine of: \$25 for a first violation; \$50 for a second violation; \$100 for a third violation; and \$500 for a fourth violation and any subsequent violation thereafter. Furthermore each day upon which any condition of the ordinance is violated constitutes a separate violation.

During severe and critical water shortages (Stages III and IV), there will be additional charges applied for excessive water use. During these water shortages, the General Manager may take

further actions if violations continue after the one written warning, such as installing a flow-restricting device on the service line, or termination of service for repeated violations of unauthorized water use. Table 5-4 presents the stages during which penalties and charges take effect.

Table 5-4 (DWR Table 38) Water shortage contingency — penalties and charges	
Penalties or Charges	Stage When Penalty Takes Effect
Penalty for excess use	II, III, IV
Charge for excess use	III, IV
Flow Restriction	III, IV
Termination of Service	III, IV

5.2.5 Revenue and Expenditure Impacts During Water Shortages

CWC Section 10632 (f) requires an analysis of the impacts of consumption reduction on the revenues and expenditures of the water supplier. TODB will establish an accounting for tracking expenses and revenue shortfalls associated with water conservation and rationing. TODB maintains reserve funds that can be used to offset expenditure impacts during times of emergency. TODB will implement a surcharge to recover unmitigated revenue shortfalls.

5.2.6 Other Actions During Catastrophic Reductions

In the event of catastrophic reduction in water supplies, TODB would implement emergency preparedness plans, depending on the cause and severity of the water shortage. California Water Code (CWC) Section 10632 (c) requires certain actions to be undertaken by the water supplier during a catastrophic interruption in water supplies. A catastrophic event resulting in water shortage would be any event, either natural or man-made, with varying levels of severity to the water supply conditions. Examples include, but are not limited to, a regional power outage, an earthquake, or other disasters.

TODB has in place an Emergency Operations Plan that would be implemented by the TODB staff in the event of a catastrophic water shortage. TODB has equipped its facilities with standby emergency generators that would be operated if the catastrophic event involved loss of power. Both of the water treatment plants and booster stations are equipped with permanent emergency generators and automatic transfer switches. TODB owns portable generators that can be used to operate the groundwater pumping stations. If there is catastrophic rupturing of pipelines, during

an earthquake for example, the emergency operations procedures would be followed to isolate the damaged sections, notify customers and immediately repair the damage.

5.3 Water Quality Impacts on Water Shortage

Water quality standards for the TODB water system are dictated through the primary and secondary maximum contaminant levels (MCLs) as set forth in the Federal and State Drinking Water Standards. While the TODB raw water supply (groundwater from wells) meets primary MCL standards, it exceeds the secondary MCL for manganese and iron. TODB operates two iron and manganese treatment facilities to comply with the secondary standards for these constituents.

The groundwater supply also contains levels of total dissolved solids (TDS) that are near the maximum contaminant levels. Drinking water regulations specify three MCL levels for TDS: recommended MCL of 500 ppm; an upper MCL of 1,000 ppm; and a short term MCL of 1,500 ppm. All wells are below the recommended level of TDS, with exception of one supply well, Well 5A, which exceeds the recommended level. Well 5A is monitored closely due to a structural feature that permits cross flow from a brackish zone under certain pumping conditions. TODB is currently considering options to optimally use this well in a manner that provides adequate water quality and source protection.

The water quality from the TODB groundwater source has remained at consistent concentrations and there are no measurable or anticipated water shortages that would be caused by degrading water quality in the water supply. As shown in Table 5-5, there are no projected water quality impacts on water supply.

Table 5-5 (DWR Table 30)
Water quality — current and projected water supply impacts

Water Source	Description of Condition	2010	2015	2020	2025	2030	2035
Groundwater	Adequate	0	0	0	0	0	0

5.4 Drought Planning

5.4.1 Water Year Types

In the context of drought planning, this section describes reliability of the water supply and vulnerability to seasonal or climatic shortage for the following water-year types, as defined by CWC Section 1062 (i):

- **Average water year:** *A year in the historical sequence that most closely represents median runoff levels and patterns. It is defined as the median runoff over the previous 30 years or more. This median is recalculated every 10 years.*
- **Single dry water year:** *Generally considered to be the lowest annual runoff for a watershed since the water year beginning in 1903. Suppliers should determine this for each watershed from which they receive supplies.*
- **Multiple dry water years:** *Generally considered to be the lowest average runoff for a consecutive multiple-year period (i.e., 3 years or more) for a watershed since 1903. For example, 1928–1934 and 1987–1992 were the two multi-year periods of lowest average runoff during the 20th century in the Central Valley. Suppliers should determine this for each watershed from which they receive supplies.*

TODB has not calculated the water year-types for its watershed; however, appropriate base years for TODB would be the same as nearby water agencies. Table 5-6 presents the water year-types reported in The City of Antioch 2010 Urban Water Management Plan, and are considered appropriate for TODB.

Table 5-6 (DWR Table 27) Basis of water year data	
Water Year Type	Base Year(s)
Average Water Year	2000 to 2004
Single-Dry Water Year	1994
Multiple-Dry Water Years	1987-1990

Seasonal fluctuations observed in groundwater levels do not result in any considerable loss of production for TODB. Furthermore, TODB has always been able to pump 100% of its groundwater supply during previous multiple-dry years.

Table 5-2 summarizes the effects water year-types would have on water supply and groundwater production. Annual groundwater production varies depending on the water demand. The maximum production of record was 1,328 MGY in 2008. Had 2015 been a single-dry or multiple-dry year, TODB would have had access to 100% of its groundwater supplies.

Table 5-7 (DWR Table 28)					
Supply reliability — historic conditions					
Average / Normal Water Year	Single Dry Water Year	Multiple Dry Water Years			
		Year 1	Year 2	Year 3	Year 4
1,328 (record maximum in 2008)	1,328	1,328	1,328	1,328	1,328
Percent of Average/Normal Year:	100%	100%	100%	100%	100%

5.4.2 Three-Year Minimum Water Supply

CWC Section 10632 (b) requires the UWMP to include an estimate of the minimum water supply in the next three years based on the driest three-year historic sequence for the agency’s water supply. The driest three-year historic sequence is noted above in Table 5-6, though the recent three years (2011, 2012 and 2013) have also been exceptionally dry with drought emergencies declared statewide. Throughout TODB history, there have never been impacts to supply caused by droughts. Therefore, there is no limitation on water supply in the next three years associated with drought. Table 5-8 summarizes the estimated minimum water supply in the next three years based on the next three years being the driest three-year historical sequence.

Table 5-8 (DWR Table 31)				
Supply reliability — current water sources				
Water supply sources ¹	Average / Normal Water Year Supply ²	Multiple Dry Water Year Supply ²		
		Year 2015	Year 2016	Year 2017
Groundwater	1,328	1,328	1,328	1,328
Percent of normal year:	100%	100%	100%	100%

5.4.3 Measurement for Determining Actual Consumption Reduction

CWC Section 16032 (i) require the water supplier to develop a mechanism for determining actual reductions in water use when implementing the urban water supply shortage contingency

plan. Water production is measured daily at the water treatment plants that supply water to the system. Metered customers are recorded quarterly. Exceptionally high usage from customers are identified and investigated for potential water loss or over-use. In that event the customers would be notified and the problem remedied.

5.4.4 Water Supply and Demand Assessment

The water supply and demand assessment shall compare the total water supply sources with the total projected water use over the next 20 years for normal, single-dry and multiple-dry years. Tables 5-9, 5-10 and 5-11 provide the assessment of supply versus demand for each water year type. It should be noted that the estimated supply for each year is exactly equal to the estimated potable water demand, because there are no anticipated supply shortages. Furthermore, there is no anticipated impact to groundwater yield for any water year type.

Table 5-9 (DWR Table 32)					
Supply and demand comparison — normal year (MGY)					
	2015	2020	2025	2030	2035
Supply totals (from Table 4-2)	1,304	1,258	1,258	1,258	1,473
Demand totals (From Table 3-14)	1,304	1,258	1,258	1,258	1,473
Difference	0	0	0	0	0
Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%

Table 5-10 (DWR Table 33)					
Supply and demand comparison — single dry year (MGY)					
	2015	2020	2025	2030	2035
Supply totals^{1,2}	1,304	1,258	1,258	1,258	1,473
Demand totals^{2,3,4}	1,304	1,258	1,258	1,258	1,473
Difference	0	0	0	0	0
Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%

¹Consider the same sources as in Table 16. If new sources of water are planned, add a column to the table and specify the source, timing, and amount of water.

²Provide in the text of the UWMP text that discusses how single-dry-year water supply volumes were determined.

³Consider the same demands as in Table 3. If new water demands are anticipated, add a column to the table and specify the source, timing, and amount of water.

⁴The urban water target determined in this UWMP will be considered when developing the 2020 water demands included in this table.

Table 5-11 (DWR Table 34)						
Supply and demand comparison — multiple dry-year events						
		2015	2020	2025	2030	2035
Multiple-dry year first year supply	Supply totals^{1,2}	1,304	1,258	1,258	1,258	1,473
	Demand totals^{2,3,4}	1,304	1,258	1,258	1,258	1,473
	Difference	0	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%	0%
Multiple-dry year second year supply	Supply totals^{1,2}	1,304	1,258	1,258	1,258	1,473
	Demand totals^{2,3,4}	1,304	1,258	1,258	1,258	1,473
	Difference	0	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%	0%
Multiple-dry year third year supply	Supply totals^{1,2}	1,304	1,258	1,258	1,258	1,473
	Demand totals^{2,3,4}	1,304	1,258	1,258	1,258	1,473
	Difference	0	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%	0%

¹Consider the same sources as in Table 16. If new sources of water are planned, add a column to the table and specify the source, timing, and amount of water.

²Provide in the text of the UWMP text that discusses how single-dry-year water supply volumes were determined.

³Consider the same demands as in Table 3. If new water demands are anticipated, add a column to the table and specify the source, timing, and amount of water.

⁴The urban water target determined in this UWMP will be considered when developing the 2020 water demands included in this table.

Chapter 6 Demand Management Measures

6.1 Overview

Demand management measures (DMMs) are mechanisms a water supplier implements to improve water conservation and reduce water supply needs of the system. This chapter describes the water conservation efforts from TODB in terms of 14 DMMs that are defined in the 2010 UWMP Guidelines. The plan outlined in this chapter represents TODB's management tools to maximize the local water resources.

The 14 DMMs defined in the 2010 UWMP Guidelines were developed as a coordinated effort by DWR, water utilities, environmental organizations and other interested parties throughout California. This consensus-building effort resulted in the *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU), first adopted in 1991 and last amended in 2011. The MOU formalizes an agreement by signatory agencies to commit to water conservation by implementing DMMs that are economically feasible. The MOU is administered by the California Urban Water Conservation Council (CUWCC), which has a Board of Directors comprised of representatives from signatory member agencies.

In preparing this section of the 2010 UWMP, CUWCC members have the option of submitting their annual reports in lieu of describing DMMs. TODB is not a signatory member and, therefore, is providing a detailed description of each DMM as it relates to water conservation efforts pursued by TODB.

6.2 Demand Management Measure Implementation

This section provides a comprehensive description of water conservation programs that are employed currently and are planned to be implemented in the future. TODB's water conservation programs are described in accordance with the list of 14 DMMs (A - N) in Table 6-1. For each DMM there is a description of the measure, the schedule for implementation, steps for implementation, methods to evaluate effectiveness and estimated water savings.

TODB is pursuing water conservation programs and DMMs that are economically feasible and appropriate for reducing water demand with a goal to meet the 2020 Water Use Targets defined in Chapter 3. Not all DMMs are planned to be implemented by TODB, but all DMMs were considered by TODB and are discussed. TODB's objective is to implement measures that will have the greatest impact on reducing water consumption within its available financial resources. Notably, TODB is planning an aggressive meter retrofit program, under which 3,738 un-metered

connections will be metered by the end of Fiscal 2017-18. The retrofit program will be a key DMM to meeting the water use targets.

Table 6-1 Demand Management Measures	
DMM - A	Water survey programs for single-family residential and multifamily residential customers
Year Implemented - Schedule	Ongoing with updates in 2018 after services are retrofitted with meters
Description	TODB provides residents with free home water use auditing at the request of customers. Services include leak detection assistance, conservation survey of home appliances, recommending repairs, and water use efficiency techniques for landscape practices and irrigation timers. During a home survey, TODB will identify toilets, washing machines and plumbing fixture replacements that could reduce household water use and provide residents with estimated water savings. TODB also discusses use of weather-based irrigation controllers and how to program irrigation timers.
Steps to Implement	Upon request of the customers, TODB conducts the survey. Results are entered into the customer file.
Methods to Evaluate Effectiveness	For metered customers, the effectiveness is evaluated by comparing audited customer's prior use with use after any water savings changes are made.
Estimated Water Savings	Water saving has not been estimated by this program, however up to 10% is anticipated per audited residence depending on the change in practices or repairs.
DMM - B	Residential plumbing retrofit
Year Implemented - Schedule	N/A
Description	TODB does not have a plumbing retrofit program such as providing low-flow showerheads or faucet aerator kits to customers. During home water surveys (see DMM - A), TODB informs residents and makes recommendations for plumbing upgrades that would reduce water consumption. Customers would purchase and install upgrades at their own cost. Fixtures would be funded by fees charged to all of the residents. Approximately 50% of the current homes are pre-1992 (before the Energy Policy was enacted) that could potentially result in water savings from plumbing retrofits – those customers are identified and notified in the public information program (see DMM – G). TODB has not implemented this type of program due to cost. Resources are instead being utilized for other DMMs such as the meter retrofit program (DMM – D). TODB is on schedule to meet its water use targets by implementing other DMMs and the WWTP Recycled Water Project discussed in Chapters 3 and 4.
Steps to Implement	TODB does not plan to implement this program.
Methods to Evaluate Effectiveness	N/A
Estimated Water Savings	N/A

DMM - C	System water audits, leak detection, and repair
Year Implemented - Schedule	Ongoing with updates in 2018 after services are retrofitted with meters
Description	Currently, TODB visually monitors the system with a focus on areas with older pipelines and immediately repairs any leaks that are visually identified. Current estimates of water system unaccounted losses range from 7-12% of total production, which are attributed to pipe breaks, pipe leakage and flushing programs. Whenever pipe leaks are identified and repaired, TODB documents and keeps a record of the pipe material, condition and location to identify areas of higher failure probability, which are used in developing and updating the pipe replacement programs. TODB will expand the system water audit capabilities after the meter retrofit program (see DMM – D), which is planned to be completed by the end of FY 2017-18. Several pipe replacement programs are planned by 2020 to improve fireflows and reduce leakage.
Steps to Implement	Monitor areas of higher leak frequency, update pipe replacement program as warranted by leak frequency and cause. Update water auditing capability after all services are retrofitted with meters (planned by 2017).
Methods to Evaluate Effectiveness	The effectiveness will be evaluated by tracking leak detection and repair and comparing prior water use with water use after repairs are made.
Estimated Water Savings	Water losses are approximately 7-12% of annual production. It is estimated that the leak detection program will improve water losses to approximately 6% of annual production based on quantity of mainlines planned to be replaced.
DMM - D	Metering with commodity rates for all new connections and retrofit of existing connections
Year Implemented - Schedule	Partially started in 2008, to be reinitiated in 2015 and completed by 2018.
Description	TODB's program for metering with commodity rates is implemented for commercial and landscape accounts. TODB requires all new services be installed with a meter. TODB began retrofitting existing residential meters in 2008. Currently, approximately 3,738 services are un-metered (64% of all services). TODB's objective is to implement metering with commodity rates of all services, starting with a meter retrofit program that will begin in July 2015 and ending in June 2018. The metering with commodity rates consists of: require meters on new services; establish a program to retrofit meters on un-metered services; read meters and bill on volume use; bill bi-monthly or more frequently; establish a program to test, repair and/or replace meters; consider splitting mixed-use commercial and landscape meters to have a dedicated landscape meter.
Steps to Implement	Retrofit un-metered connections over a three year implementation beginning FY 2015-16 and ending FY 2017-18. Develop commodity rates.
Methods to Evaluate Effectiveness	Effectiveness will be measured by comparing prior water deliveries to future water deliveries.
Estimated Water Savings	Savings cannot be measure yet; however, the CUWCC reports a savings of 20% can be realized by retrofitting un-metered services. This DMM is integral to meeting the 2020 Water Use Target discussed in Chapter 3, in addition to a water use offset from the WWTP Recycled Water Project (see Chapters 3 and 4).

DMM – E	Large landscape conservation programs and incentives
Year Implemented - Schedule	2015
Description	Most Home Owners Associations (HOA) in the service area utilize weather-based landscape irrigation controllers in common landscape areas, and TODB has installed weather-based controllers on other large landscape irrigation services (such as parks and common area landscapes not maintained by private HOA's). TODB has identified the remaining large landscape services that do not have weather based controllers. TODB has not conducted ETO-based water use budgets for common landscape areas nor has it developed an incentives program to replace existing landscaping with low-water use planting.
Steps to Implement	Involve remaining HOAs and TODB properties in implementing weather-based landscape irrigation controllers.
Methods to Evaluate Effectiveness	Effectiveness cannot be evaluated on existing services that already have weather based landscape irrigation controllers. New retrofits will be evaluated by comparing prior water use to future water use after the retrofits are made.
Estimated Water Savings	Retrofitting systems with weather-based controllers will reduce landscape consumption, the amount is unknown.
DMM – F	High-efficiency washing machine rebate programs
Year Implemented - Schedule	N/A
Description	TODB does not have a rebate program for high-efficiency washers, such as incentives or ordinances requiring the purchase of high-efficiency clothes washing machines. TODB identified a Pacific Gas & Electric (PG&E) rebate program for \$150 for qualifying high-efficiency washing machines installed between January 1, 2015 and December 31, 2015. No separate rebates are being pursued by TODB. During home water survey programs (see DMM - A) and as part of the public information program (see DMM – G), TODB will inform residents of the PG&E rebate and make recommendations for high-efficiency washing machines that would reduce water consumption. Under these circumstances, customers would purchase the high-efficiency washing machine and apply for the PG&E rebate at their own cost. TODB has not implemented any rebates due to cost. Resources are instead being utilized for other DMMs such as the meter retrofit program (DMM – D). TODB is on schedule to meet its water use targets by implementing other DMMs and the WWTP Recycled Water Project discussed in Chapters 3 and 4.
Steps to Implement	TODB does not plan to implement this program.
Methods to Evaluate Effectiveness	N/A
Estimated Water Savings	N/A

DMM - G	Public information programs
Year Implemented - Schedule	2008 - ongoing
Description	<p>TODB has an ongoing public information program to promote water conservation by informing customers about the needs and benefits of water conservation. The public information program generally consists of the following methods for disseminating information: providing customers with bill inserts; using paid public advertising; providing information via a link on the TODB website (www.saveourh20.org); providing year-to-year comparisons in customer water bills (for those that are metered); sending out a newsletter twice per year; and, a portable digital message board that is moved throughout town to display water conservation messages and information. The digital message board is used to display reminders about conservation and setting irrigation timers during summer months, and reminders about water use prohibitions during droughts or water shortages.</p> <p>TODB recognizes that social marketing and attitude behavior are important factors in reducing water consumption. As a result, messaging and public information will need to be continually updated based on public input and staff training in water conservation techniques. TODB also seeks to improve targeted messaging, such as identifying and contacting the residents in pre-1992 homes that could benefit most from specific plumbing upgrades. Furthermore, with the retrofit of all un-metered connections, TODB will improve the targeted messaging by including information and comparison of water use for each resident.</p>
Steps to Implement	Continue to update customers on water conservation activities and improve targeted messaging via the TODB website and the other forms discussed above.
Methods to Evaluate Effectiveness	Savings cannot be directly quantified.
Estimated Water Savings	Though it cannot be quantified, these programs likely have already reduced annual water consumption and will continue to do so with increasing public awareness.

DMM – H	School education programs
Year Implemented - Schedule	2016 – ongoing thereafter
Description	TODB intends to develop an education program with local school districts in the service area to provide instructional assistance and educational materials. The education program will involve explaining how water is acquired, stored and treated for consumption and specifically where the local water supplies comes from and environmental issues. The materials will be developed in coordination with teachers to meet state educational framework and grade-appropriate materials. It will start with meeting with teachers and school administration and educating the teachers on this subject. TODB will work with teachers to develop booklets and conservation-related handouts for the students. TODB may also provide presentations to students or participate in science fairs.
Steps to Implement	Hold workshops with local school administration and teaching staff. Develop grade-appropriate material.
Methods to Evaluate Effectiveness	Future savings cannot be directly quantified.
Estimated Water Savings	Future savings cannot be directly quantified.
DMM - I	Conservation programs for commercial, industrial, and institutional accounts
Year Implemented - Schedule	N/A
Description	TODB does not have any industrial water demand, and the commercial and institutional water use is relatively small (less than 4% of total water use). TODB is already metering the CII water demands with commodity rates. No further programs for CII water reduction are considered due to cost and minimal benefits. TODB is on schedule to meet its water use targets by implementing other DMMs and the WWTP Recycled Water Project (see Chapters 3 and 4).
Steps to Implement	TODB does not plan to implement this program.
Methods to Evaluate Effectiveness	N/A
Estimated Water Savings	N/A

DMM - J	Wholesale agency programs
Year Implemented - Schedule	N/A
Description	The district does not have wholesale water exchanges.
Steps to Implement	N/A
Methods to Evaluate Effectiveness	N/A
Estimated Water Savings	N/A
DMM - K	Conservation pricing
Year Implemented - Schedule	June 2018
Description	This measure relates with DMM – D (metering with commodity rates) and focuses on setting a rate structure with a price signal to customers to use water efficiently. In general, conservation pricing models involve setting a commodity rate structure such that a significant portion of the total revenues come from the volumetric billing as compared to the fixed rate charges. However, each agency is unique in how rates are set and professional studies are required to determine the rate case most applicable for each agency. TODB will review the rate case and will implement a conservation pricing element after the metering retrofit program is completed, by 2017. It is unknown if the commodity rate structure will be a uniform rate or a tiered rate structure.
Steps to Implement	Complete the meter retrofit program. Conduct a rate study and hold public meetings to determine the new rate structure.
Methods to Evaluate Effectiveness	The effectiveness of this DMM will be evaluated during the rate study and then assessed after it is implemented by measuring water savings before and after the meter retrofit and rate structure changes.
Estimated Water Savings	The water savings for this DMM is part of the water reduction estimated for the meter retrofit program (DMM – D).

DMM – L	Water conservation coordinator
Year Implemented - Schedule	2015 - Ongoing
Description	TODB has designated a staff member to be responsible for coordinating water conservation program management, tracking, planning and reporting on the DMM implementation. The designated water conservation coordinator is the Water and Wastewater Manager.
Steps to Implement	The water conservation coordinator works with other staff, customers and stakeholders to implement the water conservation program.
Methods to Evaluate Effectiveness	Water savings cannot be directly measured.
Estimated Water Savings	Water savings cannot be directly measured.
DMM - M	Water waste prohibition
Year Implemented - Schedule	2014 - Ongoing
Description	<p>On September 3, 2014, TODB enacted an ordinance on waste prohibition and assess fines for repeat offenders (Ordinance No. 25 Establishing Emergency Drought Regulations, see Appendix C).</p> <p>TODB has also established the Water Shortage Contingency Plan in this 2010 UWMP (Chapter 5) that defines further prohibitions to be implemented in the event of a water shortage emergency affecting TODB supply wells by up to a 50% reduction.</p> <p>TODB is considering implementing a landscape ordinance based on the State issued Model Water Efficient Landscape Ordinance (MWELO) that would require landscape permit, plan check, or design review for new and rehabilitated landscape areas that exceed a minimum square footage.</p>
Steps to Implement	During a water shortage emergency, waste prohibitions are declared by the Board of Directors and administered, implemented and enforced by the General Manager.
Methods to Evaluate Effectiveness	Water savings would be assessed during a water shortage emergency based on tracking total production and individual metered accounts.
Estimated Water Savings	Implementing prohibitions will save water from 0-50% when the prohibitions are enforced during a water shortage emergency. (see Chapter 5)

DMM - N	Residential ultra-low-flush toilet replacement programs
Year Implemented - Schedule	N/A
Description	<p>TODB does not have an incentive-based program (e.g. rebates) for replacing existing toilets with water efficient toilets. These types of programs aim at replacing toilets manufactured prior to 1992 (when the Energy Policy was enacted) and that use more than 3.5 gallons per flush (gpf) with a High-Efficiency Toilet meeting the WaterSense Specification of 1.28 gpf.</p> <p>Assuming the average person flushes 5 times per day and there are 2.23 persons per household in TODB, the average household in TODB can save approximately 9,000 gallons per year of water by replacing their pre-1992 toilets. TODB has approximately 2,900 homes built before 1992; however, many of those homes have likely already updated toilets through remodels, though the actual number of updated toilets has not been determined.</p> <p>During home water surveys program (see DMM - A) and as part of the public information program (see DMM – G), TODB will make recommendations for replacing toilets and provide the households with an estimated reduction in water use. Customers would purchase at their own cost. TODB has not established a rebate-based program due to cost. Resources are instead being utilized for other DMMs such as the meter retrofit program (DMM – D). TODB is on schedule to meet its water use targets by implementing other DMMs and the WWTP Recycled Water Project (see Chapters 3 and 4).</p>
Steps to Implement	N/A
Methods to Evaluate Effectiveness	N/A
Estimated Water Savings	N/A

Appendix A
UWMP Checklist

Table I-2 Urban Water Management Plan checklist, organized by subject

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
PLAN PREPARATION				
4	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	10620(d)(2)		Section 1.2
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)		Section 1.2 Section 1.3
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Section 1.3
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	10635(b)		Section 1.3
55	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642		Section 1.2
56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Section 1.3
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642		Section 1.3
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Section 1.3

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to the California State Library and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. This also includes amendments or changes.	10644(a)		Section 1.3
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645		Section 1.3
SYSTEM DESCRIPTION				
8	Describe the water supplier service area.	10631(a)		Section 2.1 Section 2.2
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 2.3
10	Indicate the current population of the service area	10631(a)	Provide the most recent population data possible. Use the method described in "Baseline Daily Per Capita Water Use." See Section M.	Section 2.4
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 2.4
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Section 2.4
SYSTEM DEMANDS				
1	Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e)		Section 3.1 Section 3.2

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
2	<i>Wholesalers:</i> Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. <i>Retailers:</i> Conduct at least one public hearing that includes general discussion of the urban retail water supplier's implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a)	Retailers and wholesalers have slightly different requirements	Section 1.3
3	Report progress in meeting urban water use targets using the standardized form.	10608.40	(form not yet available)	Section 3.2
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (A) single-family residential, (B) multifamily, (C) commercial, (D) industrial, (E) institutional and governmental, (F) landscape, (G) sales to other agencies, (H) saline water intrusion barriers, groundwater recharge, conjunctive use, and (I) agriculture.	10631(e)(1)	Consider 'past' to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Section 3.3 Section 3.4 Section 3.7 Section 3.8
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	Not Applicable (Section 3.6)
34	Include projected water use for single-family and multifamily residential housing needed for lower income households, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)		Section 3.5
SYSTEM SUPPLIES				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided.	Section 4.1
14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 4.1

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)		Section 4.2
16	Describe the groundwater basin.	10631(b)(2)		Section 4.2
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		Section 4.1
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Not Applicable (Section 4.2)
19	For groundwater basins that are not adjudicated, provide information as to whether DWR has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition. If the basin is adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Section 4.1
20	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	10631(b)(3)		Section 4.2.4
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)	Provide projections for 2015, 2020, 2025, and 2030.	Section 4.2.4
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Not Applicable (Section 4.3)
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs addressed in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h)		Not Applicable (Section 4.6)
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Not Applicable (Section 4.4)

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
44	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 4.5
45	Describe the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	10633(a)		Section 4.5.1
46	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)		Section 4.5.2
47	Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	10633(c)		Section 4.5.3
48	Describe and quantify the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)		Section 4.5.3
49	The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	10633(e)		Section 4.5.3
50	Describe the actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.	10633(f)		Section 4.5.4
51	Provide a plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.	10633(g)		Section 4.5.5
WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING ^b				
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		Section 6.1
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	10631(c)(1)		Section 5.4

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
23	For any water source that may not be available at a consistent level of use - given specific legal, environmental, water quality, or climatic factors - describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.	10631(c)(2)		Section 5.1
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)		Section 5.2
36	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.	10632(b)		Section 5.4.2
37	Identify actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.	10632(c)		Section 5.2.6
38	Identify additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.	10632(d)		Section 5.2.2
39	Specify consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.	10632(e)		Section 5.2.3
40	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Section 5.2.4
41	Provide an analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.	10632(g)		Section 5.2.5
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Appendix C.1
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Section 5.4.3

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location
52	Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	For years 2010, 2015, 2020, 2025, and 2030	Section 5.3
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)		Section 5.4.4
DEMAND MANAGEMENT MEASURES				
26	Describe how each water demand management measures is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 6.2
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Section 6.2
28	Provide an estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the ability to further reduce demand.	10631(f)(4)		Section 6.2
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)	See 10631(g) for additional wording.	Section 6.2
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	Not Applicable (Section 6.1)

a The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.

b The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review.

Appendix B

***Coordination and Adoption: Notices to Agencies of
Public Hearing, Resolution to Adopt UWMP***

(NOT INCLUDED IN DRAFT)

Appendix C

Water Conservation Ordinances

C.1 Draft Water Shortage Contingency Resolution

C.2 Resolution 2014-11 - Voluntary Water Reduction

C.3 Ordinance No.25 – Establishing Emergency Drought Regulations

**TOWN OF DISCOVERY BAY
COMMUNITY SERVICES DISTRICT**

RESOLUTION _____

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE TOWN OF DISCOVERY BAY,
A CALIFORNIA COMMUNITY SERVICES DISTRICT,
ON THE IMPLEMENTATION OF STAGE [II, III, OR IV] OF THE WATER SHORTAGE
CONTINGENCY PLAN AS OUTLINED IN THE 2010 URBAN WATER MANAGEMENT PLAN
ON FILE WITH THE CALIFORNIA DEPARTMENT OF WATER RESOURCES**

WHEREAS, on [DATE], by Resolution _____, The Board of Directors of the Town of Discovery Bay Community Services District approved the 2010 Urban Water Management Plan; and

WHEREAS, the 2010 Urban Water Management Plan includes the Water Shortage Contingency Plan; and

WHEREAS, based on the [describe water supply shortage condition caused by drought or loss of water supply wells] the Board of Directors of the Town of Discovery Bay Community Services District hereby declares that a water shortage emergency condition prevails within the water service area of the Town of Discovery Bay and that water use within the Town of Discovery Bay should be reduced by up to [15, 35 or 50] percent; and

WHEREAS, required water use reduction described above necessitates implementation of Stage [II, III, or IV] of the Town of Discovery Bay's Water Shortage Contingency Plan. The water conservation measures and water use restrictions for Stage [II, III or IV] are described in the attached Water Shortage Contingency Plan. Implementation of Stage [II, III or IV] shall be cumulative and shall include implementation of all previous provisions listed in Stages [I, II, or III]; and

WHEREAS, the General Manager is hereby authorized and empowered to delegate his or her authority hereunder to such assistants, deputies, officers, employees, or agents of the Town as he or she shall designate, and to establish such rules, regulations and procedures, and to prepare or furnish such forms, as he or she deems necessary or appropriate to carry out the provisions of the Resolution; and

WHEREAS, this Resolution shall be effective upon its adoption, and shall remain effective until the water shortage conditions are resolved, in which case this Resolution shall be rescinded, or until conditions worsen, thus requiring additional action by the Board of Directors, in which case a subsequent Resolution will be considered for adoption.

NOW, THEREFORE BE IT RESOLVED by the Board of Directors of the Town of Discovery Bay that Stage [II, III, or IV] of the Water Shortage Contingency Plan is hereby adopted.

PASSED, APPROVED AND ADOPTED THIS [day] DAY OF [month], [year] by the following vote:

Water Shortage Contingency Plan

Table of Contents

Section 1	Stages of Action
Section 2	Prohibitions
Section 3	Consumption Reduction Methods
Section 4	Penalties
Section 5	Revenue and Expenditure Impacts During Water Shortages
Section 6	Other Actions During Catastrophic Reductions

List of Tables

1. Rationing Stages to address water Supply Shortages
2. Mandatory Prohibitions
3. Proposed Consumption Reduction Methods
4. Penalties and Charges

Attachments

1. Resolution 2014-11 – Voluntary Water Reduction (Appendix C.2)
2. Ordinance No. 25 Establishing Emergency Drought Regulations (Appendix C.3)

This document outlines stages of actions that will be implemented by TODB in the event of water supply shortages and emergency preparedness and plans for catastrophic events. The purpose of this contingency plan is to provide a plan of action to be followed at the various stages of a water shortage. A copy of TODB's current water reduction ordinances and resolutions, are in Appendix C.2 and C.3.

Section 1 Stages of Action

CWC Section 10632 (a) requires stages of action to be undertaken by the water supplier in response to water supply shortages, including up to a 50-percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.

TODB will implement a four-stage action in response to water supply shortages to comply with State requirements. The stages will be implemented during water supply shortages, or regional drought conditions that may not be directly influencing TODB water supplies. The stage determination and declaration of a water supply shortage will be made by the TODB Board of Directors.

Stage I – This stage is part of an ongoing public information campaign encouraging voluntary water conservation. TODB issued a resolution for voluntary water use in *Resolution 2014-11 – Voluntary Water Reduction* (Appendix C.2). There is little to no water shortage during Stage 1. Although Stage I is ongoing, customers are reminded when a regional single-year drought is occurring, or when TODB has a redundant back-up well offline for repairs, which makes the overall supply system more vulnerable to shortages.

Stage II – This stage would be initiated during moderate water shortage (of up to 15%) and would be the first stage where mandatory conservation and water use prohibitions are enforced. Failure of two groundwater supply wells could cause a moderate reduction in water supply resulting in implementation of Stage II. Stage II would also be implemented during a regional severe drought where water conservation is mandatory but impacts to TODB's groundwater supply wells are negligible or non-existent. During Stage II the Board of Directors will declare prohibitions on water use, in accordance with the *TODB Ordinance No. 25 Establishing Emergency Drought Regulations* (Appendix C.3).

Stage III – This stage would be initiated during a severe water shortage (15 to 35%), which could be caused by a catastrophic failure of up to three groundwater supply wells. During Stage III, the Board of Directors would adopt a new ordinance providing authority for the General Manager to implement additional prohibitions and consumption reduction methods that would include water rationing if other consumption reduction methods are not effective at reducing demand.

Stage IV – This stage would be initiated during a critical water shortage (35 to 50%), which could be caused by a catastrophic failure of more than three groundwater supply wells. All steps taken in the prior stages would be intensified and production would be monitored daily for compliance with necessary reductions. Residents would be under water rationing. TODB would be in emergency status to repair and bring online water supply wells.

Table 1 lists the four stages of action for the water shortage contingency.

Table 1 Rationing Stages to Address Water Supply Shortages		
Stage No.	Water Supply Conditions	% Shortage
I - Voluntary	Normal to Minimum – Ex: loss of a redundant well supply	0-5%
II – Mandatory Conservation	Moderate – Ex: Severe drought <u>or</u> catastrophic loss of 2 wells	0-15%
III - Rationing	Severe to Critical – Ex: Catastrophic loss of 3 wells	15-35%
IV – Intense Rationing	Severe to Critical – Ex: Catastrophic loss of 3 or more wells	35-50%

Section 2 Prohibitions

The CWC Section 10632 (d) requires water suppliers to implement mandatory prohibitions against specific water use practices that may be considered excessive during water shortages. If drought conditions or water shortages warrant mandatory prohibitions (Stage II) TODB will implement the current water shortage emergency response plan, *Ordinance No. 25 Establishing Emergency Drought Regulations* (Appendix C.3). Further mandatory prohibitions will be implemented if warranted based on Stage III or Stage IV conditions. Table 2 identifies potential prohibitions that would be enforced during a water shortage emergency.

Table 2 Mandatory Prohibitions	
Prohibitions	Stage When Prohibition Becomes Mandatory
Excessive outdoor watering (causing runoff to non-irrigated areas)	II, III, IV
Use of hose without a shut-off nozzle for vehicle washing	II, III, IV
Application of water to driveways or sidewalks	II, III, IV
Use of water in non-circulating fountain or water feature	II, III, IV
Outdoor irrigation beyond the allowed watering schedule	II, III, IV
Uncorrected plumbing leaks	III, IV
Washing cars	III, IV
Watering lawns/landscapes or filling outdoor water features	III, IV

Section 3 Consumption Reduction Methods

CWC Section 10632 (e) requires the water supplier to implement consumption-reduction methods during the most severe stages of water shortage that are capable of reducing water use by up to 50%. TODB would implement the water consumption–reduction methods shown on Table 3, below. Some of the methods are on-going and are part of the TODB water conservation efforts addressed in the Demand Management Measures.

Table 3 Proposed Consumption Reduction Methods		
Consumption Reduction Methods	Stage When Method Takes Effect	Projected Reduction (%)
Demand Reduction Program	All stages	10-20%
Water conservation kits	All stages	10-20%
Education programs	All stages	10-20%
Voluntary rationing	All stages	0-20%
Mandatory prohibitions	II, III, IV	10-20%
Apply flow restrictions to customers	III, IV	35-50%
Water shortage pricing	III, IV	10-50%
Apply penalties for excessive water use	II, III, IV	10-50%
Restrict water use for only priority uses	III, IV	10-50%
Mandatory water rationing, per capita allotment	IV	20-50%

Section 4 Penalties

CWC Section 10632 (f) requires a water supplier to penalize or charge for excessive use, where applicable. In accordance with the TODB Ordinance No. 25, when a water shortage emergency is declared, the General Manager may issue a Notice of Violation to any customer that fails to comply with the conditions of the ordinance. After one notice has been issued further violations shall be punishable by a fine of: \$25 for a first violation; \$50 for a second violation; \$100 for a third violation; and \$500 for a fourth violation and any subsequent violation thereafter.

Furthermore each day upon which any condition of the ordinance is violated constitutes a separate violation.

During severe and critical water shortages (Stages III and IV), there will be additional charges applied for excessive water use. During these water shortages, the General Manager may take further actions if violations continue after the one written warning, such as installing a flow-restricting device on the service line, or termination of service for repeated violations of unauthorized water use. Table 4 presents the stages during which penalties and charges take effect.

Penalties or Charges	Stage When Penalty Takes Effect
Penalty for excess use	II, III, IV
Charge for excess use	III, IV
Flow Restriction	III, IV
Termination of Service	III, IV

Section 5 Revenue and Expenditure Impacts During Water Shortages

CWC Section 10632 (f) requires an analysis of the impacts of consumption reduction on the revenues and expenditures of the water supplier. TODB will establish an accounting for tracking expenses and revenue shortfalls associated with water conservation and rationing. TODB maintains reserve funds that can be used to offset expenditure impacts during times of emergency. TODB will implement a surcharge to recover unmitigated revenue shortfalls.

Section 6 Other Actions During Catastrophic Reductions

In the event of catastrophic reduction in water supplies, TODB would implement emergency preparedness plans, depending on the cause and severity of the water shortage. California Water Code (CWC) Section 10632 (c) requires certain actions to be undertaken by the water supplier during a catastrophic interruption in water supplies. A catastrophic event resulting in water shortage would be any event, either natural or man-made, with varying levels of severity to the water supply conditions. Examples include, but are not limited to, a regional power outage, an earthquake, or other disasters.

TODB has in place an Emergency Operations Plan that would be implemented by the TODB staff in the event of a catastrophic water shortage. TODB has equipped its facilities with standby emergency generators that would be operated if the catastrophic event involved loss of power. Both of the water treatment plants and booster stations are equipped with permanent emergency generators and automatic transfer switches. TODB owns portable generators that can be used to operate the groundwater pumping stations. If there is catastrophic rupturing of pipelines, during an earthquake for example, the emergency operations procedures would be followed to isolate the damaged sections, notify customers and immediately repair the damage.



**TOWN OF DISCOVERY BAY
COMMUNITY SERVICES DISTRICT**

RESOLUTION 2014-11

**A RESOLUTION OF THE BOARD OF DIRECTORS
OF THE TOWN OF DISCOVERY BAY,
A CALIFORNIA COMMUNITY SERVICES DISTRICT,
ENCOURAGING DISCOVERY BAY RESIDENTS TO VOLUNTARILY
REDUCE WATER CONSUMPTION BY 20% TO AID IN DROUGHT RELIEF EFFORTS**

WHEREAS, Town of Discovery Bay Community Services District has as one of its functions the production, treatment and delivery of potable water for domestic purposes; and

WHEREAS, the State of California is in the midst of a three-year water drought that has severely depleted the reservoirs and lakes necessary to provide continued water supplies to all Californians; and

WHEREAS, on January 17, 2014 California Governor Edmund G. Brown declared a water State of Emergency as California and the West enter yet another year of extreme drought conditions; and

WHEREAS, on April 25, 2014 Governor Brown urged all Californians to reduce water consumption by 20%, and encourages all Californians to visit www.saveourh2o.org to find out how water can be conserved.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE TOWN OF DISCOVERY BAY COMMUNITY SERVICES DISTRICT DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1. That the Town of Discovery Bay encourages all Discovery Bay water users to voluntarily reduce water consumption by 20% until the time the drought has ended and to visit www.saveourh2o.org to find ways to conserve water.

SECTION 2. The Board Secretary shall certify the adoption of this Resolution.

PASSED, APPROVED AND ADOPTED THIS 4th DAY OF June, 2014.

Mark Simon
Board President

I hereby certify that the foregoing Resolution was duly adopted by the Board of Directors of the Town of Discovery Bay Community Services District at a regularly scheduled meeting, held on June 4, 2014, by the following vote of the Board:

AYES: 5
NOES: 0
ABSENT: 0
ABSTAIN: 0

Richard J. Howard
Board Secretary



**TOWN OF DISCOVERY BAY
COMMUNITY SERVICES DISTRICT
ORDINANCE NO. 25**

**AN ORDINANCE OF THE BOARD OF DIRECTORS
OF THE TOWN OF DISCOVERY BAY,
A CALIFORNIA COMMUNITY SERVICES DISTRICT,
ESTABLISHING EMERGENCY DROUGHT REGULATIONS**

Be it ordained by the Board of Directors of the Town of Discovery Bay Community Services District as follows:

SECTION 1. Short Title

This Ordinance shall be known and may be cited as Town of Discovery Bay Drought Emergency Regulation Ordinance.

SECTION 2. Purpose

The purpose of this Ordinance is to protect the health, safety, and welfare of residents of the Town of Discovery Bay Community Services District; to respond to the current drought crisis and other possible crises in the future; to authorize the Board of Directors to declare a water shortage emergency; and to regulate water usage with the District for the purpose of conserving severely limited water resources.

SECTION 3. Water Shortage Emergency Declaration

The Board of Directors may declare a water shortage emergency by resolution and upon finding that additional water use restrictions are necessary for the immediate protection of health and safety or are required by State law.

A water shortage emergency declaration shall remain in effect until the Board of Directors finds and declares by resolution that the water shortage emergency condition has abated, has changed in degree, or no longer exists.

SECTION 4. Regulations

While a water shortage emergency declaration is in effect, the following activities shall be prohibited except where necessary to address an immediate health and safety need:

1. The application of potable water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;
2. The use of a hose that dispenses potable water to wash a motor vehicle except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use;
3. The application of potable water to driveways and sidewalks;
4. The use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system;
5. Outdoor irrigation of lawns, ornamental landscapes, or turf with potable water, except as follows:
 - a. Dwellings or establishments with odd numbered street addresses may use outdoor water before 1 p.m. and after 7 p.m. on Wednesdays and Sundays only;

- b. Dwellings or establishments with even numbered street addresses may use outdoor water before 1p.m. and after 7 p.m. on Tuesdays and Saturdays only.
- c. All dwellings, establishments, businesses, associations, parks or open spaces that are connected to an outdoor irrigation system which provides outdoor irrigation to multiple addresses, units and/or areas with or without an address may use outdoor water not more than two days per week for each zone or area controlled by that irrigation system.

SECTION 5. Enforcement

The General Manager of the District shall administer, implement and enforce the provisions of this Ordinance. Any powers granted to or duties imposed upon the General Manager may be delegated by the General Manager to persons acting in the beneficial interest of or in the employ of the District.

SECTION 6. Violation

The General Manager, or his/her designee, may issue a Notice of Violation to any person, business, association, or other party who fails to comply with any condition of this Ordinance. Failure to comply with any condition of this Ordinance after the issuance of a Notice of Violation shall be punishable by a fine of \$25 for a first violation, a fine of \$50 for a second violation, a fine of \$100 for a third violation, and a fine of \$500 for a fourth violation and any subsequent violation thereafter. Each day upon which any condition of this Ordinance is violated shall constitute a separate violation.

Any use or activity in violation of the terms of this Ordinance is declared to be a nuisance per se, and may be abated by order of any court of competent jurisdiction. The District Board, in addition to other remedies, may institute any appropriate action or proceedings to prevent, abate, or restrain the violation. All costs, fees and expenses in connection with such action shall be assessed as damages against the violation.

SECTION 7. Severability

The various parts, paragraphs, section, and clauses of this Ordinance are declared to be severable. If any part, sentence, paragraph, section, or clause is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the Ordinance shall not be affected.

SECTION 8. Adoption and Effective Date

This Ordinance is hereby declared to have been adopted by the District Board at a meeting thereof duly called and held on the 3rd day of September, 2014, and ordered to be given effect thirty (30) days after its first publication as mandated by statute.

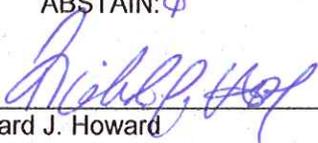
CERTIFICATION

Passed and adopted at a regular meeting of the Board of Directors of the Town of Discovery Bay Community Services District held on September 3, 2014 by the following vote:



Mark Simon
Board President

AYES: 5
NOES: 0
ABSENT: 0
ABSTAIN: 0



Richard J. Howard
Board Secretary



Town of Discovery Bay

"A Community Services District"

AGENDA REPORT

Meeting Date

April 14, 2015

Prepared By: Rick Howard, General Manager *RH*
Submitted By: Rick Howard, General Manager

Agenda Title

Groundwater Sustainability Plan Proposal for Services

Recommended Action

Approve expenditure with Luhdorff and Scalmanini Consulting Engineers in the amount of \$23,658.40 to conduct technical support for planning and compliance with the Sustainable Groundwater Management Act of 2014 (Act) and authorize the General Manager to execute all contract documents

Executive Summary

In 2014 the state of California rolled out new regulations affecting all water users that utilize groundwater for their service needs. The Town of Discovery Bay is the only water agency within the Tracy Subbasin (TSB) that relies wholly on groundwater to serve the 14,000+/- residents of the Town. Groundwater is pumped to the community through a series of 5 wells, with a 6th well expected to be on line later this summer.

The water is pumped from an aquifer that is part of the much larger TSB. Within the TSB, there are three sub-areas with distinct groundwater features. The subareas include the portions of the TSB basin in East Contra Costa County (ECCC), San Joaquin County, and a region known as the Delta Islands.

In developing the Act, the State placed an emphasis on "Local Control", and the need to manage groundwater supplies in a manner that best fits the needs of local users and stakeholders, or in this case, the ECCC water agencies responsible for water supply in the area.

The scope of the work will allow for the 5 East Contra Costa County water agencies (City of Brentwood, Town of Discovery Bay, Diablo Water District, East Contra Costa Irrigation District, and Byron Bethany Irrigation District) to make better and more informed decisions with regard to local and regional water interests in the formation of a Groundwater Sustainability Agency (GSA) and preparation of a Groundwater Sustainability Plan (GSP) which are required as a part of the Act. The work is also intended to preserve local control of groundwater resources by the East County Parties to the extent applicable under the legislation.

The five General Managers of the water agencies noted above have spent a considerable amount of time assessing the "local control" aspects of the Plan and are unified in the desire to maintain local control. Also, the scope of work will also explore the possibility of submitting proposed basin boundary changes to the state (resulting in a basin managed entirely by the ECCC agencies, as well as the County), as well as an alternative submittal showing that sustainable conditions exist and thereby avoid some of the requirements under the Act. Consequently, it was the goal of the ECCC agencies that the proposal as presented by Luhdorff and Scalmanini be split equally between the 5 parties. Contra Costa County will provide in-kind assistance and participate in the effort; however, they will not participate as an equity partner. The proposal is submitted in the amount of \$118,292, or \$23,654.80 per agency.

It is important that the Town maintain local control over the water serving Discovery Bay, and that other public agencies that do not have the same or similar interests as the ECCC agencies not have the ability to influence or mandate policies affecting the ECCC water agencies.

"Continued to the next page"

Fiscal Impact:

Amount Requested \$23,654.80

Sufficient Budgeted Funds Available?: No.

Prog/Fund # Category: Pers. Optg. X Reserves Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item

N/A

Attachments

L&S Proposal for Services

AGENDA ITEM: F-2

PROPOSAL



SUSTAINABLE GROUNDWATER MANAGEMENT ACT OF 2014 TECHNICAL SUPPORT FOR PLANNING AND COMPLIANCE

Prepared for: Byron-Bethany Irrigation District
City of Brentwood
Contra Costa County
Diablo Water District
East Contra Costa Irrigation District
Town of Discovery Bay

Date: April 1, 2015

Luhdorff & Scalmanini Consulting Engineers, Inc. (LSCE) is pleased to submit a scope and budget to provide technical assistance for planning and compliance with the 2014 Sustainable Groundwater Management Act (SGMA). The proposed work will provide for informed decisions by east Contra Costa County water entities for which this proposal is prepared (East County Parties) to participate with other local and regional water interests in the formation of a Groundwater Sustainability Agency (GSA) and preparation of a Groundwater Sustainability Plan (GSP) as required under the Act. The work is also intended to preserve local control of groundwater resources by the East County Parties to the extent applicable under the legislation.

The technical work in this proposal addresses two issues discussed at a planning meeting of the East County Parties on December 18, 2014:

1. The applicability of current Department of Water Resources (DWR) Bulletin 118 subbasin boundaries, which govern GSA formation and GSP development.
2. The applicability of an alternative GSP submittal for the East Contra Costa County portion of the Tracy Subbasin satisfying the requirement of operating within a sustainable yield for at least 10 years.

Regarding the first issue, groundwater occurrence in the east Contra Costa county area has generally exhibited characteristics independent of the greater Tracy subbasin boundaries published in DWR Bulletin 118, which govern GSA formation and GSP preparation. The East County Parties wish to understand options for seeking subbasin boundary revisions for the Tracy Subbasin as provided in the SGMA. Regarding the second issue, it is the general experience of local groundwater users that current groundwater pumping is sustainable. Therefore, the East

County Parties wish to determine whether it is feasible, or desirable, to prepare an alternative GSP submittal, also as provided in the SGMA.

The SGMA provides a timeline for the development and implementation of sustainable management plans in all groundwater basins in the state. The proposed work will be conducted prior to adoption of comprehensive regulations governing GSA formation and GSP plan implementation. By performing the work in advance of final guidelines, the East County Parties will have a technical basis for decisions that will be required under the Act; namely, formation of a GSA and defining GSP areas. Relevant SGMA milestones include:

Date	Milestone
Mid-2015	DWR comment period for regulations for basin boundary revisions
January 1, 2016	DWR adopts regulations for basin boundary revisions
June 1, 2016	DWR adopts regulations for: <ol style="list-style-type: none"> 1. Evaluating and implementing GSPs 2. Regulations for coordinating agreements 3. Regulations for evaluating alternative submittals
January 1, 2017	Alternative submittals due
2017	DWR publishes Bulletin 118 Interim Update with updated basin boundaries and basin priorities
June 30, 2017	GSAs established for all high- and medium-priority basins
January 31, 2020	High- and medium-priority basins subject to critical conditions of overdraft must be managed under GSP
January 31, 2022	All high- and medium-priority basins must be managed under GSP

The SGMA also requires engagement with interested parties, defined as all beneficial users of groundwater, to ensure that existing water rights are preserved and that local knowledge and experience are considered in GSP development. To address this requirement, the proposed work includes a communication plan to engage local interested parties in east Contra Costa County as well as water entities in the greater subbasin.

Background

The general experience of the East County Parties is that local groundwater conditions are stable and that usage is within the sustainable yield of the groundwater system. Sustainable yield is defined in the SGMA as:

“...the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result.”

An “*undesirable result*” is one or more adverse effects that include 1) chronic lowering of groundwater levels, 2) significant and unreasonable reduction of groundwater storage, 3) seawater intrusion, 4) degraded water quality, 5) significant and unreasonable land subsidence, and 6) adverse depletions of interconnected surface water.

As supported by a number of reports by East County Parties including the 2007 AB3030 Groundwater Management Plan (Lead Agency, Diablo Water District), a 2011 groundwater monitoring update, and a 2014 updated CASGEM plan, there is no evidence of conditions leading to undesirable results in the east Contra Costa County area. However, the SGMA requires sustainability planning to account for growth over an extended planning horizon of 50 years. Therefore, it is imperative that water agencies and interested parties develop:

- a robust hydrogeologic conceptualization to guide groundwater use, development, and protection;
- a water budget to identify relevant inputs and outputs of the system, and
- current and ongoing demonstration of sustainability through appropriate data collection, monitoring, and reporting.

The above elements will be required in GSPs, though detailed criteria will not be adopted until 2016 and 2017. Preliminarily, planning should consider current DWR basin boundaries published in DWR Bulletin 118. The East County Parties reside in the Tracy Subbasin, which includes portions of San Joaquin County to the east and south. Bulletin 118 states that current boundaries are based on best available information, but it also states that local agencies may have more relevant data and information concerning local boundaries. As a result, a provision of the SGMA enables local parties to seek boundary adjustments if appropriate criteria are met.

The schedule for GSP implementation focuses on high- and medium-ranked groundwater basins subject to critical conditions of overdraft (GSP implementation required by 2020). Other high- and medium-ranked basins follow in the schedule priority (2022). The rankings are based on the CASGEM Groundwater Basin Prioritization Process, which places greatest emphasis on groundwater reliance. The “Medium” ranking assigned to the Tracy Subbasin does not reflect degraded or overdrafted conditions, but that there is significant reliance on groundwater as a source of supply within the basin. It should be noted that the 2014 prioritization under which the Tracy Subbasins was assigned “Medium Priority,” may change with consideration of local habitat and streamflow impacts, which were not previously considered, and any basin boundary modifications.

This proposal recognizes that the East County Parties are concerned that the SGMA grants potentially broad powers to GSAs through ability to limit groundwater extractions, impose fees for groundwater management, and enforce terms of a GSP. The SGMA does not resolve or provide criteria for selection of a GSA when more than one local agency seeks the role. The powers and potential disputes over GSA formation make it especially prudent to develop a sound

technical understating of local groundwater resources, their interconnections with surrounding areas, and to establish local control when appropriate. Ultimately, and as intended by the SGMA, DWR will approve formation of GSAs and GSPs with greater weight on hydrogeologic rather than geopolitical factors. With this background, LSCE's approach and proposed tasks are presented below.

Approach

The proposed approach relies on an existing framework of technical information to accomplish the following:

1. Update the hydrogeologic conceptualization prepared by LSCE for east county agencies in 1999 by examining interconnections to southern and eastern portions of the Tracy Subbasin.
2. Empirically analyze sustainable yield in the east Contra Costa county area and assess the viability of an alternative submittal under the SGMA.
3. Prepare a report on technical findings to aid the East County Parties with decisions on GSA formation and GSP development. The report will provide recommendations to comply with SGMA implementation.

The framework for technical work includes the following key documents:

1. The 1999 study of groundwater resources in east Contra Costa County prepared by LSCE.
2. The 2007 AB3030 Groundwater Management Plan covering the east Contra Costa county area.
3. A 2011 monitoring update report extending interpretation of east county groundwater conditions since adoption of the 2007 Groundwater Management Plan.
4. A data gap analysis completed in 2012 that assessed available and needed groundwater information as part of an IRWMP for various east county water entities.
5. The CASGEM monitoring plan encompassing eastern Contra Costa County and data collected to date.

Other documents, including water master plans, Urban Water Management Plans, and water project reports will also be reviewed.

Using the framework of available records, LSCE will develop new geologic cross sections to identify interconnections with the greater Tracy Subbasin. The focus will be on the relationship between aquifer units in east Contra Costa County and those in the Tracy and Delta regions to the south and east, respectively.

In addition to evaluating basin interconnections, an empirical analysis of sustainable yield in east Contra Costa County will be performed. This effort will integrate existing water level data, precipitation records, and groundwater pumpage to develop conclusions as to current sustainable yield and absence of undesirable effects.

In addition to the technical work, LSCE will prepare a communication plan to engage interested parties to ensure that appropriate input and communication occurs as required under the Act. LSCE will rely on experience and existing communication methods (websites and other electronic means) by the East County Parties to notify other groundwater users of the intent and progress of the technical work. It is anticipated that outreach will target small water systems, Disadvantaged Communities, and small to large private pumpers. We understand that Contra Costa County can provide assistance in identifying some of these parties through its well and small water system permitting role.

Scope of Work

The proposed scope of work will be conducted according to five tasks detailed below. The tasks are based on the objectives and approach described above.

Task 1: DWR Kickoff Meeting and Engagement of Interested Parties

Under Task 1, LSCE will coordinate a kickoff meeting with DWR and agencies in the Tracy Subbasin. The purpose of the meeting is to present the proposed technical evaluation scope and seek input from DWR on the approach. Subsequently, DWR will be included in the distribution of the project summary report in draft and final forms.

Under Task 1, LSCE will also cooperatively develop a communication plan that includes routine communication with interested parties (as defined in the SGMA) and documentation of that communication. Throughout the work, a list of interested parties will be maintained in accordance with SGMA requirements for GSAs.

Although the proposed work is a precursor to GSA formation, engagement is considered important to identify issues for other local pumpers that may not be directly applicable to the East County Parties. Communication will be made via existing east county agency websites and mailers (when applicable), and possibly direct mailings to selected interested parties. Communication will be milestone driven. Milestones for which recurring communication will be targeted include:

- Methods and call for identifying interested parties.
- Notice of outreach protocol and communication plan.
- Notice of intent to conduct technical work related to GSA formation and GSP development.
- Efforts to quantify groundwater pumpage.

- Coordination with other local agencies in the greater Tracy Subbasin.
- Completion of draft and final reports.

Task 1 Key Activities and Deliverables

1. Kickoff meeting with DWR.
2. Preparation of a communication plan.
3. Routine communication.
4. Documentation of communications and maintenance of an interested parties list.

Task 2: Technical Evaluation of East County Area Boundaries

Under Task 2, LSCE will evaluate hydrogeologic conditions and boundaries according to accepted definitions and criteria. The examination will consider the 2014 updated CASGEM monitoring plan approved by DWR and groundwater connections with southern and eastern portions of the Tracy Subbasin.

In accordance with DWR Bulletin 118 (2003 Update), the definition of a basin is:

“...an alluvial aquifer or a stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction and a definable bottom.”

Lateral boundaries include geologic structures, such as faults, strata of lower permeability, bedrock, hydraulic features such as ocean shoreline, a river, or a stream. Vertical boundaries include the water table, base of fresh water, or bedrock. Geopolitical boundaries that do not represent restrictions in groundwater movement are not considered appropriate boundaries for this evaluation. LSCE will seek to identify lateral and vertical boundaries that would apply to GSA formation and GSP development in accordance with accepted criteria.

The framework for this task will be the 1999 hydrogeologic investigation in which several hundred well logs were evaluated and used to map depositional features in the east county area. The depositional model served as the basis for subsequent AB3030 Groundwater Management Plan and CASGEM programs for the area. Notably, there are no other sources of detailed hydrogeology available for the east county area.

Task 2 Key Activities and Deliverables

1. Extend geologic cross sections from current Groundwater Management Plan and CASGEM areas into other portions of the Tracy Subbasin to the east and south.
2. Interpret interconnections with southern and eastern portions of the Tracy Subbasin.

Task 3: Empirical Evaluation of East County Area Sustainable Yield

Under Task 3, LSCE will evaluate historical data spanning representative hydrologic periods to empirically analyze sustainable yield. The analysis will be based on existing water level databases from CASGEM monitoring and that by individual agencies. Other data requirements include historical pumpage from the major groundwater users in the area, and precipitation records. LSCE will seek records from each participant to fulfill these input requirements.

The premise for the empirical method is that when groundwater conditions are determined to be stable through normal to dry hydrologic periods, a determination of sustainability can be made when pumping is known. By contrast, stable conditions in a predominantly wet period cannot lead to a similar finding. Given the recent dry periods and stable conditions observed in parts of east Contra Costa County, it is anticipated that strong empirical support for sustainability can be developed.

Based on the empirical model, LSCE will also develop a generalized water budget as described in the 2012 data gap report to serve future GSP requirements.

Task 3 Key Activities and Deliverables

- 1. Compile historical groundwater and hydrologic data.*
- 2. Empirically relate groundwater conditions to hydrology and pumpage.*
- 3. Develop a generalized water budget.*

Task 4: East County Area Groundwater Report

Under Task 4, LSCE will conduct a meeting to present findings under Tasks 1 – 3. Based on discussion and input from participating parties, LSCE will prepare written draft and final summary reports. The summary report will have five primary sections:

1. A description of technical findings and conclusions with respect to area boundaries and consistency and/or differences with current DWR Bulletin 118 descriptions.
2. A description of technical findings regarding prevailing groundwater conditions in east Contra Costa County based on an empirical analysis of historic data.
3. An assessment of the viability of an alternative submittal under the SGMA.
4. Recommendations pertaining to GSA formation and GSP development.
5. A description and documentation of communication with interested parties.

Task 4 Key Activities and Deliverables

1. *Coordinate a meeting to present findings.*
2. *Preparation of a review draft and final report.*

Task 5: Meetings and Project Management

Under Task 5, LSCE will provide project management for the proposed integrated tasks. For budgeting purpose, we assume five project meetings will be conducted one of which will include other agencies in the Tracy Subbasin (a separate kickoff meeting with DWR is budgeted and included under Task 1). LSCE will coordinate data acquisition and other assistance as needed. Status reports will be made via e-mail, on an as-needed basis.

Task 5 Key Activities and Deliverables

1. *Coordinate up to six project meetings including: kick-off meeting with Tracy Subbasin parties and a meeting with DWR.*
2. *Provide status reports via e-mail.*

Project Staffing

LSCE will manage and perform the proposed work with qualified and experienced professional staff. Tom Elson will manage and direct the work. Key personnel will be assigned based on topical areas as shown on the organization chart in **Attachment 1**.

A brief description of project roles is provided below:

Project Manager and Primary Contact – Tom Elson

Tom Elson will work with the participating entities to coordinate data collection, outreach to interested parties, SGMA compliance, and perform project management. Mr. Elson has 36 years of experience with well projects and groundwater studies including work with multiple east county agencies. He has conducted similar projects in the Bay Area and throughout the Central San Joaquin Valley.

Hydrogeology – Ken Utley

Ken Utley will develop new geologic cross sections and refined boundary interpretations to address interconnections throughout the Tracy Subbasin. Mr. Utley has 39 years of experience and developed the geologic model for the 1999 hydrogeologic report. He has performed local studies for well projects for the Town of Discovery Bay, City of Brentwood, and Diablo Water District.

Empirical Estimates of Safe Yield and Water Budget – Peter Leffler

Peter Leffler will develop an empirical yield analysis and generalized water budget. Mr. Leffler has 25 years of hydrogeologic consulting experience throughout California. He will be assisted by Nick Newcomb, a staff hydrogeologist.

Water Use Projections – John Fawcett and Justin Shobe

John Fawcett and Justin Shobe will work with the Project Manager to quantify past, current, and future groundwater usage in the east Contra Costa County area to serve both the empirical yield analysis and future GSP planning needs. Mr. Fawcett is a Senior Principal with LSCE and has conducted engineering studies, managed water construction projects, and prepared water master plans. Mr. Fawcett has 36 years of engineering experience. Justin Shobe will assist Mr. Fawcett and is a Project Engineer with 10 years of experience.

SGMA Compliance and Outreach – Vicki Kretsinger Grabert

Vicki Kretsinger Grabert will assist with outreach and SGMA compliance issues. Ms. Kretsinger has more than 30 years of experience in groundwater quality assessment and resource management, including design of monitoring networks and programs, application of environmental regulations, long-term groundwater quality monitoring and protection programs, and groundwater supply sufficiency and availability assessments.

Under the proposed scope, it is not anticipated that outside legal or facilitation services will be needed. In subsequent stages of compliance with the SGMA, such outside services may be desired by one or more parties, particularly for GSA formation and GSP preparation.

Fee Schedule

LSCE will bill in accordance with its regular Schedule of Fees for Engineering and Field Services, included in **Attachment 2**. LSCE will bill monthly for labor according to this schedule.

Project Cost Estimate

A proposed budget is presented on the Project Cost Estimate Worksheet in **Attachment 3**. The cost estimate worksheet shows labor costs according to personnel involved in the work and LSCE's fee schedule. The total budget estimate is **\$118,300**.

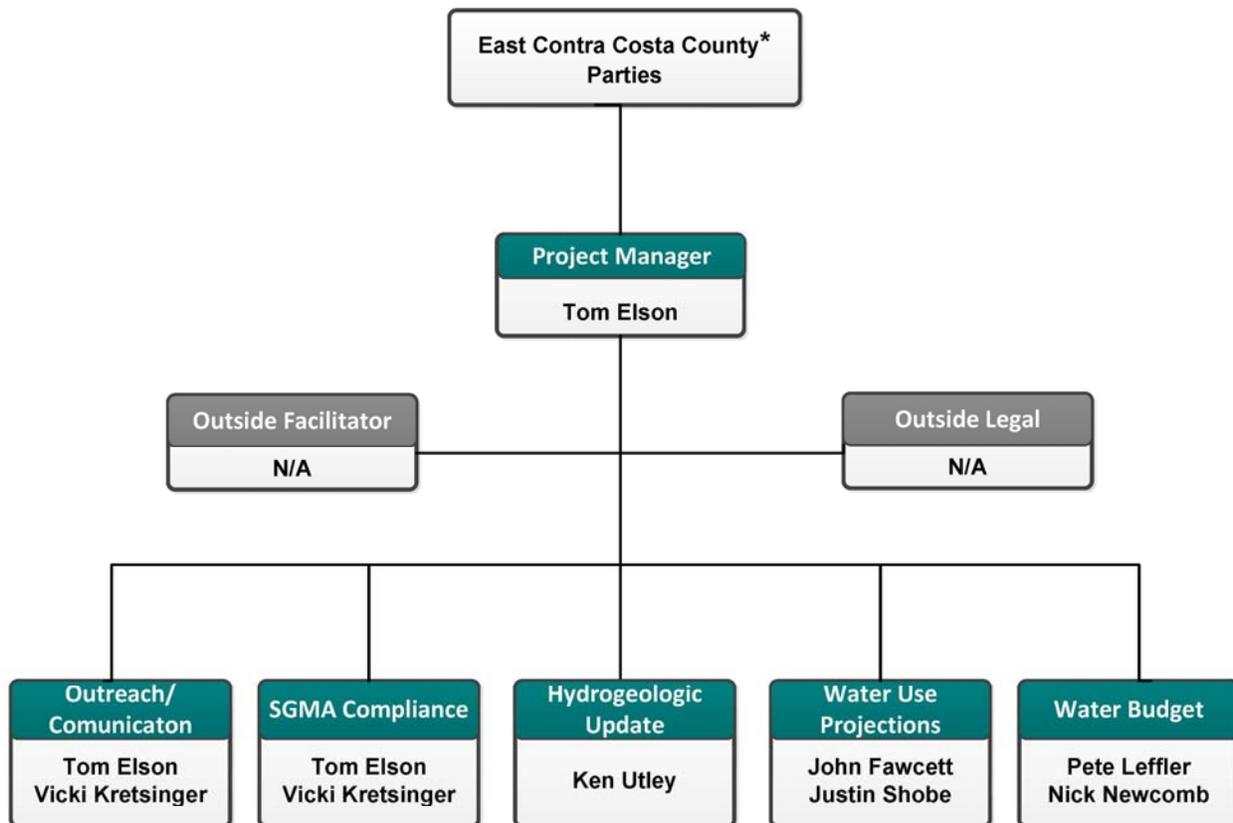
Schedule

LSCE's proposed schedule is presented in **Attachment 4** with a final report completed by the end of 2015. The work will be completed prior to adoption of regulations governing GSA formation and GSP plan implementation by DWR. By performing this work in 2015 in advance of final DWR regulations, the East Contra Costa Parties and local interested parties will have a basis for making decisions required under the Act in 2016 and 2017 such as submittals for basin boundary revisions, alternative GSP submittals, and formation of GSAs.

ATTACHMENT 1

LSCE Organization Chart

2014 SGMA Technical Support for Planning and Compliance



* Byron-Bethany Irrigation District
 City of Brentwood
 Contra Costa County
 Diablo Water District
 East Contra Costa County Irrigation District
 Town of Discovery Bay

ATTACHMENT 2

Fee Schedule

**LUHDORFF & SCALMANINI
CONSULTING ENGINEERS
500 FIRST STREET
WOODLAND, CALIFORNIA 95695**

2015

Professional:*

<i>Senior Principal</i>	\$ 198/hr.
<i>Principal Professional</i>	\$ 195/hr.
<i>Project Manager</i>	\$ 180/hr.
<i>Senior Professional</i>	\$ 172/hr.
<i>Project Professional</i>	\$ 130 to 167/hr.
<i>Staff Professional</i>	\$ 110 to 128/hr.

Technical:

<i>Engineering Inspector</i>	\$ 120 to 128/hr.
<i>Engineering Assistant</i>	\$ 95/hr.
<i>Technician</i>	\$ 95/hr.
<i>ACAD Drafting</i>	\$ 110/hr.

Clerical Support:

<i>Word Processing, Clerical</i>	\$ 67/hr.
----------------------------------	-----------

<i>Vehicle Use</i>	\$ 0.55/mi.
<i>Subsistence</i>	Cost Plus 15%
<i>Groundwater Sampling Equipment (Includes Operator)</i>	\$ 170.00/hr.
<i>Copies</i>	.20 ea.

<i>Professional or Technical Testimony</i>	200% of Regular Rates
<i>Requested Technical Overtime</i>	150% of Regular Rates
<i>Outside Services/Rentals</i>	Cost Plus 15%
<i>Services by Associate Firms</i>	Cost Plus 15%

ATTACHMENT 3

Project Cost Estimate Worksheet

PROJECT ESTIMATE WORKSHEET

Client East County Parties
Project SGMA Compliance
Est. By TE
Date April 1, 2015



Task	Description	Project Manager Elson \$198	Sr. Principal Kretsinger \$198	Sr. Principal Fawcett \$198	Principal Leffler \$195	Senior Geologist Utley \$172	Project Engineer Shobe \$167	Project Prof King \$167	Staff Prof. Newcomb \$125	AutoCAD Tague \$110	Clerical McNeil \$67	Summary
1	DWR Kickoff Meeting and Engagement of Interested Parties											
	Task Hours	32	12	8	0	0	32	0	0	0	12	96
	Task Cost	\$6,336	\$2,376	\$1,584	\$0	\$0	\$5,344	\$0	\$0	\$0.00	\$804	\$16,444
2	Technical Evaluation of East County Area Basin Boundaries											
	Task Hours	20	0	0	0	72	0	16	0	48	2	158
	Task Cost	\$3,960	\$0	\$0	\$0	\$12,384	\$0	\$2,672	\$0	\$5,280	\$134	\$24,430
3	Empirical Evaluation of East County Area Sustainable Yield											
	Task Hours	32	0	16	60	0	24	24	40	0	2	198
	Task Cost	\$6,336	\$0	\$3,168	\$11,700	\$0	\$4,008	\$4,008	\$5,000	\$0.00	\$134	\$34,354
4	East County Area Groundwater Report											
	Task Hours	48	8	8	24	0	12	24	0	24	12	160
	Task Cost	\$9,504	\$1,584	\$1,584	\$4,680	\$0	\$2,004	\$4,008	\$0	\$2,640.00	\$804.00	\$26,808
5	Meetings and Project Management											
	Task Hours	48	0	12	12	0	0	0	0	0	8	80
	Task Cost	\$9,504	\$0	\$2,376	\$2,340	\$0	\$0	\$0	\$0	\$0	\$536	\$14,756
	NA											
	Task Hours	0	0	0	0	0	0	0	0	0	0	0
	Task Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Hours		180	20	44	96	72	68	64	40	72	36	692
Subtotal Cost		\$35,640	\$3,960	\$8,712	\$18,720	\$12,384	\$11,356	\$10,688	\$5,000	\$7,920	\$2,412	\$116,792
Outside Services										<u>ADMIN @ 15</u>		
										<u>Cost</u>	<u>Percent</u>	<u>Subtotal</u>
1.									\$0	\$0	\$0
2.									\$0	\$0	\$0
Subtotal Outside Services												\$0
Travel, Reproductions, and Incidentals												\$1,500
TOTAL PROJECT COST ESTIMATE												\$118,292

ATTACHMENT 4

Project Schedule

ID	Task Mode	Task Name	Duration	Start	Finish	May '15			Jun '15			Jul '15			Aug '15			Sep '15			Oct '15			Nov '15			Dec '15			Jan '16						
						26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22
1		Engagement of Interested Parties	174 days	Mon 5/4/15	Thu 12/31/15																															
2		Kick-off Meeting with DWR and Other Agencies	0 days	Mon 5/11/15	Mon 5/11/15	◆ 5/11																														
3		Prepare communication Plan	30 days	Mon 5/4/15	Fri 6/12/15																															
4		Status Meeting with Other Agencies	0 days	Mon 8/10/15	Mon 8/10/15	◆ 8/10																														
5		Technical Evaluation of East Co. Boundaries	90 days	Mon 5/4/15	Fri 9/4/15																															
6		Data Collection	30 days	Mon 5/4/15	Fri 6/12/15																															
7		Extend Cross Sections	80 days	Mon 5/18/15	Fri 9/4/15																															
8		Interpret Interconnections	40 days	Mon 7/6/15	Fri 8/28/15																															
9		Empirical Evaluation of Sustainable Yield	115 days	Mon 5/4/15	Fri 10/9/15																															
10		Compile Historical Data	40 days	Mon 5/4/15	Fri 6/26/15																															
11		Empirical Evaluation	100 days	Mon 5/25/15	Fri 10/9/15																															
12		Generalized Water Budget	100 days	Mon 5/25/15	Fri 10/9/15																															
13		Groundwater Report	80 days	Mon 9/7/15	Fri 12/25/15																															
14		Prepare Draft	50 days	Mon 9/7/15	Fri 11/13/15																															
15		Meeting to Discuss Draft	0 days	Fri 11/13/15	Fri 11/13/15	◆ 11/13																														
16		Meeting with DWR and Other Agencies	0 days	Tue 12/1/15	Tue 12/1/15	◆ 12/1																														
17		Finalize Report	30 days	Mon 11/16/15	Fri 12/25/15																															
18		Meetings and Project Management	174 days	Mon 5/4/15	Thu 12/31/15																															
19		Project Meetings - General	118 days	Mon 5/4/15	Thu 10/15/15	◆ ◆ ◆ ◆																														

Project: East County SGMA Support Date: Wed 4/1/15	Task		External Tasks		Manual Task		Finish-only	
	Split		External Milestone	◆	Duration-only		Deadline	
	Milestone	◆	Inactive Task		Manual Summary Rollup		Progress	
	Summary		Inactive Milestone	◆	Manual Summary			
	Project Summary		Inactive Summary		Start-only			



Town of Discovery Bay

"A Community Services District"

AGENDA REPORT

Meeting Date

April 14, 2015

Prepared By: Rick Howard, General Manager
Submitted By: Rick Howard, General Manager *RH*

Agenda Title

Drought - Governor's Executive Order requiring 25% Water Reduction

Recommended Action

Informational Item(s) Only

Executive Summary

As the Board is aware, on April 1, 2015 the Governor signed Executive Order B-29-15 imposing mandatory restrictions to achieve a statewide 25% reduction in potable urban water usage through February 28, 2016. These restrictions will require water suppliers to California's cities and towns to reduce usage as compared to the amount used in 2013.

For the Town of Discovery Bay, the mandatory reduction threshold is 35%. The attached *Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction* identifies the TODB (on page 11) as conserving 18% through the monitoring periods. The critical column is the far right column that identifies the number of gallons per capita per day. Staff questions the accuracy of the data and at the time this report was being prepared a review of that data took place. Staff will provide an update at tonight's meeting.

Also attached to this report is a copy of the Executive Order B-29-15 as well as a Fact Sheet titled "Achieving a 25% Statewide Reduction in Potable Urban Water Use."

The new regulations included as part of the Executive Order and included in the Fact Sheet will go before the State Water Board on either May 6 or 7.

Staff, as well as legal counsel and the Town's water engineers will be available to provide additional information and to address any questions that the Board or public may have.

Fiscal Impact:

Amount Requested \$N/A

Sufficient Budgeted Funds Available?: (If no, see attached fiscal analysis)

Prog/Fund # Category: Pers. Optg. Cap. -or- CIP# Fund#

Previous Relevant Board Actions for This Item

N/A

Attachments

Executive Order
Mandatory Conservation Regulations Fact Sheet dated 04072015
Urban Water Supplier Tiers

AGENDA ITEM: G-1

Executive Department
State of California

EXECUTIVE ORDER B-29-15

WHEREAS on January 17, 2014, I proclaimed a State of Emergency to exist throughout the State of California due to severe drought conditions; and

WHEREAS on April 25, 2014, I proclaimed a Continued State of Emergency to exist throughout the State of California due to the ongoing drought; and

WHEREAS California's water supplies continue to be severely depleted despite a limited amount of rain and snowfall this winter, with record low snowpack in the Sierra Nevada mountains, decreased water levels in most of California's reservoirs, reduced flows in the state's rivers and shrinking supplies in underground water basins; and

WHEREAS the severe drought conditions continue to present urgent challenges including: drinking water shortages in communities across the state, diminished water for agricultural production, degraded habitat for many fish and wildlife species, increased wildfire risk, and the threat of saltwater contamination to fresh water supplies in the Sacramento-San Joaquin Bay Delta; and

WHEREAS a distinct possibility exists that the current drought will stretch into a fifth straight year in 2016 and beyond; and

WHEREAS new expedited actions are needed to reduce the harmful impacts from water shortages and other impacts of the drought; and

WHEREAS the magnitude of the severe drought conditions continues to present threats beyond the control of the services, personnel, equipment, and facilities of any single local government and require the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of section 8558(b) of the Government Code, I find that conditions of extreme peril to the safety of persons and property continue to exist in California due to water shortage and drought conditions with which local authority is unable to cope; and

WHEREAS under the provisions of section 8571 of the California Government Code, I find that strict compliance with various statutes and regulations specified in this order would prevent, hinder, or delay the mitigation of the effects of the drought.

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the Constitution and statutes of the State of California, in particular Government Code sections 8567 and 8571 of the California Government Code, do hereby issue this Executive Order, effective immediately.



IT IS HEREBY ORDERED THAT:

1. The orders and provisions contained in my January 17, 2014 Proclamation, my April 25, 2014 Proclamation, and Executive Orders B-26-14 and B-28-14 remain in full force and effect except as modified herein.

SAVE WATER

2. The State Water Resources Control Board (Water Board) shall impose restrictions to achieve a statewide 25% reduction in potable urban water usage through February 28, 2016. These restrictions will require water suppliers to California's cities and towns to reduce usage as compared to the amount used in 2013. These restrictions should consider the relative per capita water usage of each water suppliers' service area, and require that those areas with high per capita use achieve proportionally greater reductions than those with low use. The California Public Utilities Commission is requested to take similar action with respect to investor-owned utilities providing water services.
3. The Department of Water Resources (the Department) shall lead a statewide initiative, in partnership with local agencies, to collectively replace 50 million square feet of lawns and ornamental turf with drought tolerant landscapes. The Department shall provide funding to allow for lawn replacement programs in underserved communities, which will complement local programs already underway across the state.
4. The California Energy Commission, jointly with the Department and the Water Board, shall implement a time-limited statewide appliance rebate program to provide monetary incentives for the replacement of inefficient household devices.
5. The Water Board shall impose restrictions to require that commercial, industrial, and institutional properties, such as campuses, golf courses, and cemeteries, immediately implement water efficiency measures to reduce potable water usage in an amount consistent with the reduction targets mandated by Directive 2 of this Executive Order.
6. The Water Board shall prohibit irrigation with potable water of ornamental turf on public street medians.
7. The Water Board shall prohibit irrigation with potable water outside of newly constructed homes and buildings that is not delivered by drip or microspray systems.



8. The Water Board shall direct urban water suppliers to develop rate structures and other pricing mechanisms, including but not limited to surcharges, fees, and penalties, to maximize water conservation consistent with statewide water restrictions. The Water Board is directed to adopt emergency regulations, as it deems necessary, pursuant to Water Code section 1058.5 to implement this directive. The Water Board is further directed to work with state agencies and water suppliers to identify mechanisms that would encourage and facilitate the adoption of rate structures and other pricing mechanisms that promote water conservation. The California Public Utilities Commission is requested to take similar action with respect to investor-owned utilities providing water services.

INCREASE ENFORCEMENT AGAINST WATER WASTE

9. The Water Board shall require urban water suppliers to provide monthly information on water usage, conservation, and enforcement on a permanent basis.
10. The Water Board shall require frequent reporting of water diversion and use by water right holders, conduct inspections to determine whether illegal diversions or wasteful and unreasonable use of water are occurring, and bring enforcement actions against illegal diverters and those engaging in the wasteful and unreasonable use of water. Pursuant to Government Code sections 8570 and 8627, the Water Board is granted authority to inspect property or diversion facilities to ascertain compliance with water rights laws and regulations where there is cause to believe such laws and regulations have been violated. When access is not granted by a property owner, the Water Board may obtain an inspection warrant pursuant to the procedures set forth in Title 13 (commencing with section 1822.50) of Part 3 of the Code of Civil Procedure for the purposes of conducting an inspection pursuant to this directive.
11. The Department shall update the State Model Water Efficient Landscape Ordinance through expedited regulation. This updated Ordinance shall increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture, and by limiting the portion of landscapes that can be covered in turf. It will also require reporting on the implementation and enforcement of local ordinances, with required reports due by December 31, 2015. The Department shall provide information on local compliance to the Water Board, which shall consider adopting regulations or taking appropriate enforcement actions to promote compliance. The Department shall provide technical assistance and give priority in grant funding to public agencies for actions necessary to comply with local ordinances.
12. Agricultural water suppliers that supply water to more than 25,000 acres shall include in their required 2015 Agricultural Water Management Plans a detailed drought management plan that describes the actions and measures the supplier will take to manage water demand during drought. The Department shall require those plans to include quantification of water supplies and demands for 2013, 2014, and 2015 to the extent data is available. The Department will provide technical assistance to water suppliers in preparing the plans.



13. Agricultural water suppliers that supply water to 10,000 to 25,000 acres of irrigated lands shall develop Agricultural Water Management Plans and submit the plans to the Department by July 1, 2016. These plans shall include a detailed drought management plan and quantification of water supplies and demands in 2013, 2014, and 2015, to the extent that data is available. The Department shall give priority in grant funding to agricultural water suppliers that supply water to 10,000 to 25,000 acres of land for development and implementation of Agricultural Water Management Plans.
14. The Department shall report to Water Board on the status of the Agricultural Water Management Plan submittals within one month of receipt of those reports.
15. Local water agencies in high and medium priority groundwater basins shall immediately implement all requirements of the California Statewide Groundwater Elevation Monitoring Program pursuant to Water Code section 10933. The Department shall refer noncompliant local water agencies within high and medium priority groundwater basins to the Water Board by December 31, 2015, which shall consider adopting regulations or taking appropriate enforcement to promote compliance.
16. The California Energy Commission shall adopt emergency regulations establishing standards that improve the efficiency of water appliances, including toilets, urinals, and faucets available for sale and installation in new and existing buildings.

INVEST IN NEW TECHNOLOGIES

17. The California Energy Commission, jointly with the Department and the Water Board, shall implement a Water Energy Technology (WET) program to deploy innovative water management technologies for businesses, residents, industries, and agriculture. This program will achieve water and energy savings and greenhouse gas reductions by accelerating use of cutting-edge technologies such as renewable energy-powered desalination, integrated on-site reuse systems, water-use monitoring software, irrigation system timing and precision technology, and on-farm precision technology.

STREAMLINE GOVERNMENT RESPONSE

18. The Office of Emergency Services and the Department of Housing and Community Development shall work jointly with counties to provide temporary assistance for persons moving from housing units due to a lack of potable water who are served by a private well or water utility with less than 15 connections, and where all reasonable attempts to find a potable water source have been exhausted.
19. State permitting agencies shall prioritize review and approval of water infrastructure projects and programs that increase local water supplies, including water recycling facilities, reservoir improvement projects, surface water treatment plants, desalination plants, stormwater capture, and greywater systems. Agencies shall report to the Governor's Office on applications that have been pending for longer than 90 days.



20. The Department shall take actions required to plan and, if necessary, implement Emergency Drought Salinity Barriers in coordination and consultation with the Water Board and the Department of Fish and Wildlife at locations within the Sacramento - San Joaquin delta estuary. These barriers will be designed to conserve water for use later in the year to meet state and federal Endangered Species Act requirements, preserve to the extent possible water quality in the Delta, and retain water supply for essential human health and safety uses in 2015 and in the future.
21. The Water Board and the Department of Fish and Wildlife shall immediately consider any necessary regulatory approvals for the purpose of installation of the Emergency Drought Salinity Barriers.
22. The Department shall immediately consider voluntary crop idling water transfer and water exchange proposals of one year or less in duration that are initiated by local public agencies and approved in 2015 by the Department subject to the criteria set forth in Water Code section 1810.
23. The Water Board will prioritize new and amended safe drinking water permits that enhance water supply and reliability for community water systems facing water shortages or that expand service connections to include existing residences facing water shortages. As the Department of Public Health's drinking water program was transferred to the Water Board, any reference to the Department of Public Health in any prior Proclamation or Executive Order listed in Paragraph 1 is deemed to refer to the Water Board.
24. The California Department of Forestry and Fire Protection shall launch a public information campaign to educate the public on actions they can take to help to prevent wildfires including the proper treatment of dead and dying trees. Pursuant to Government Code section 8645, \$1.2 million from the State Responsibility Area Fire Prevention Fund (Fund 3063) shall be allocated to the California Department of Forestry and Fire Protection to carry out this directive.
25. The Energy Commission shall expedite the processing of all applications or petitions for amendments to power plant certifications issued by the Energy Commission for the purpose of securing alternate water supply necessary for continued power plant operation. Title 20, section 1769 of the California Code of Regulations is hereby waived for any such petition, and the Energy Commission is authorized to create and implement an alternative process to consider such petitions. This process may delegate amendment approval authority, as appropriate, to the Energy Commission Executive Director. The Energy Commission shall give timely notice to all relevant local, regional, and state agencies of any petition subject to this directive, and shall post on its website any such petition.

26. For purposes of carrying out directives 2–9, 11, 16–17, 20–23, and 25, Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division are hereby suspended. This suspension applies to any actions taken by state agencies, and for actions taken by local agencies where the state agency with primary responsibility for implementing the directive concurs that local action is required, as well as for any necessary permits or approvals required to complete these actions. This suspension, and those specified in paragraph 9 of the January 17, 2014 Proclamation, paragraph 19 of the April 25, 2014 proclamation, and paragraph 4 of Executive Order B-26-14, shall remain in effect until May 31, 2016. Drought relief actions taken pursuant to these paragraphs that are started prior to May 31, 2016, but not completed, shall not be subject to Division 13 (commencing with section 21000) of the Public Resources Code for the time required to complete them.
27. For purposes of carrying out directives 20 and 21, section 13247 and Chapter 3 of Part 3 (commencing with section 85225) of the Water Code are suspended.
28. For actions called for in this proclamation in directive 20, the Department shall exercise any authority vested in the Central Valley Flood Protection Board, as codified in Water Code section 8521, et seq., that is necessary to enable these urgent actions to be taken more quickly than otherwise possible. The Director of the Department of Water Resources is specifically authorized, on behalf of the State of California, to request that the Secretary of the Army, on the recommendation of the Chief of Engineers of the Army Corps of Engineers, grant any permission required pursuant to section 14 of the Rivers and Harbors Act of 1899 and codified in section 48 of title 33 of the United States Code.
29. The Department is directed to enter into agreements with landowners for the purposes of planning and installation of the Emergency Drought Barriers in 2015 to the extent necessary to accommodate access to barrier locations, land-side and water-side construction, and materials staging in proximity to barrier locations. Where the Department is unable to reach an agreement with landowners, the Department may exercise the full authority of Government Code section 8572.
30. For purposes of this Executive Order, chapter 3.5 (commencing with section 11340) of part 1 of division 3 of the Government Code and chapter 5 (commencing with section 25400) of division 15 of the Public Resources Code are suspended for the development and adoption of regulations or guidelines needed to carry out the provisions in this Order. Any entity issuing regulations or guidelines pursuant to this directive shall conduct a public meeting on the regulations and guidelines prior to adopting them.



31. In order to ensure that equipment and services necessary for drought response can be procured quickly, the provisions of the Government Code and the Public Contract Code applicable to state contracts, including, but not limited to, advertising and competitive bidding requirements, are hereby suspended for directives 17, 20, and 24. Approval by the Department of Finance is required prior to the execution of any contract entered into pursuant to these directives.

This Executive Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

I FURTHER DIRECT that as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given to this Order.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 1st day of April 2015.

EDMUND G. BROWN JR.
Governor of California

ATTEST:

ALEX PADILLA
Secretary of State



MANDATORY CONSERVATION
ACHIEVING A 25% STATEWIDE REDUCTION IN POTABLE URBAN WATER USE
FACT SHEET

Background

With California facing one of the most severe droughts on record, Governor Brown declared a drought State of Emergency in January 2014. Since that time, the Governor has issued three additional Executive Orders directing actions to prepare for water shortages. For the first time in state history, the Governor, in his April 1, 2015 Executive Order, directed the State Water Board to implement mandatory water reductions in cities and towns across California to reduce potable urban water usage by 25 percent statewide. This savings amounts to approximately 1.3 million acre-feet of water over the next nine months, or nearly as much water as is currently in Lake Oroville. To achieve these savings, the State Water Board is expediting emergency regulations to set usage targets for communities around the State.

Applicability

The mandatory water reductions, along with specific restrictions on commercial, industrial and institutional irrigation uses, apply to urban water suppliers as defined in water code section 10617, excluding wholesalers. Generally, urban water suppliers serve more than 3,000 customers or deliver more than 3,000 acre feet of water per year. Suppliers regulated by the Public Utilities Commission are included in the mandatory water restrictions. The Executive Order requests that the Public Utilities Commission require investor-owned water utilities to implement reductions consistent with the State Water Board requirements for all other urban water suppliers. The specific restrictions and prohibitions on water use in the Executive Order apply to all Californians and are in addition to the specific restrictions and prohibitions contained in the emergency conservation regulation approved by the Office of Administrative Law (OAL) on March 27, 2015.

Proposed Schedule

The State Water Board is expediting the development and adoption of additional regulations to implement the new restrictions and prohibitions contained in the Executive Order. There will be several opportunities for stakeholder involvement prior to the release of the formal notice of emergency rulemaking. The first opportunity follows the release of a Proposed Regulatory Framework and the second will follow the release of draft a regulation, as follows:

- Governor issues Drought Executive Order **April 1, 2015**
- Notice announcing release of draft regulatory framework and request for public comment **April 7, 2015**
- Notice announcing release of draft regulation for informal public comment **April 17, 2015**
- Emergency rulemaking formal notice **April 28, 2015**
- Board hearing and adoption **May 5 or 6, 2015**

Content of Emergency Rulemaking Package

This rulemaking package will address the following provisions of the April 1, 2015 Executive Order:

- Ordering Provision 2: Mandatory 25% reduction in potable urban water use;
- Ordering Provision 5: Commercial, industrial and institutional potable water use reductions;
- Ordering Provision 6: Prohibition on using potable water for irrigation of ornamental turf in street medians; and
- Ordering Provision 7: Prohibition on using potable water for irrigation outside of new home construction without drip or micro-spray systems.

Rate structures and other pricing mechanisms, which are very important tools for reducing water use, will be taken up in the coming weeks as required by Ordering Provision 8.

How You Can Help

To meet a mid-May to June 1 timeline for implementation of the emergency regulation, interested persons and organizations will be requested to provide input within one week of a document's release. To assist the Board in most thoughtfully addressing this dire situation, please consider the following general questions as you prepare your comments:

1. Are there other approaches to achieve a 25% statewide reduction in potable urban water use that would also impose a greater responsibility on water suppliers with higher per capita water use than those that use less?
2. How should the regulation differentiate between tiers of high, medium and low per capita water users?
3. Should water suppliers disclose their list of actions to achieve the required water reductions?
4. Should these actions detail specific plans for potable water use reductions in the commercial, industrial, and institutional (CII) sectors?
5. Should additional information be required in the monthly conservation reports for urban water suppliers to demonstrate progress towards achieving the required water reductions?
6. How and when should compliance with the required water reductions be assessed?
7. What enforcement response should be considered if water suppliers fail to achieve their required water use reductions?

How to Provide Input

Information including discussion drafts, draft regulations and related materials will be available on the State Water Board's website at:

http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/emergency_mandatory_regulations.shtml . Clear and concise written comment and questions can be sent to Jessica Bean at jessica.bean@waterboards.ca.gov.

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Cambria Community Services District	166,216,813	95,513,570	70,703,243	43%	1	10%	40.0
Vernon City of	1,907,061,769	1,788,380,162	118,681,607	6%	1	10%	43.7
Santa Cruz City of	2,527,700,000	1,933,400,000	594,300,000	24%	1	10%	44.9
Seal Beach City of	905,215,264	856,337,550	48,877,714	5%	1	10%	45.3
San Francisco Public Utilities Commission	20,365,410,000	18,717,900,000	1,647,510,000	8%	1	10%	45.7
California Water Service Company South San Francisco	2,075,673,590	1,907,534,254	168,139,336	8%	1	10%	46.1
California Water Service Company East Los Angeles	3,998,522,861	3,819,956,279	178,566,582	4%	1	10%	48.2
Coastside County Water District	565,550,000	524,430,000	41,120,000	7%	1	10%	48.2
California-American Water Company Monterey District	2,903,844,543	2,590,336,368	313,508,175	11%	1	10%	49.3
California-American Water Company San Diego District	2,795,094,888	2,578,195,144	216,899,744	8%	1	10%	49.4
East Palo Alto, City of	409,886,088	454,911,335	-45,025,247	-11%	1	10%	49.7
Golden State Water Company Bell-Bell Gardens	1,279,423,043	1,208,354,847	71,068,196	6%	1	10%	50.0
Arcata City of	499,104,000	495,047,000	4,057,000	1%	1	10%	50.2
North Coast County Water District	809,332,364	713,333,361	95,999,003	12%	1	10%	51.2
Hayward City of	4,474,967,937	3,957,222,483	517,745,455	12%	1	10%	52.2
Grover Beach City of	352,828,667	208,202,769	144,625,897	41%	1	10%	52.7
Westborough Water District	257,568,499	213,776,790	43,791,709	17%	1	10%	54.2
Daly City City of	1,888,066,301	1,622,632,784	265,433,517	14%	1	10%	55.6
Park Water Company	2,833,164,110	2,598,821,539	234,342,571	8%	2	20%	55.8
San Bruno City of	929,865,974	849,620,197	80,245,777	9%	2	20%	58.3
Port Hueneme City of	500,546,894	456,100,759	44,446,135	9%	2	20%	59.9
Soquel Creek Water District	1,046,626,000	826,889,000	219,737,000	21%	2	20%	60.3
Paramount City of	1,628,999,712	1,623,382,034	5,617,679	0%	2	20%	61.2
Golden State Water Company Bay Point	512,238,443	452,672,802	59,565,641	12%	2	20%	61.9
Amador Water Agency	899,761,000	773,623,400	126,137,600	14%	2	20%	61.9
Golden State Water Company Florence Graham	1,246,577,219	1,227,482,326	19,094,894	2%	2	20%	62.1
Compton City of	1,858,895,919	1,837,323,747	21,572,172	1%	2	20%	65.0
South Gate City of	2,066,696,383	2,017,629,675	49,066,708	2%	2	20%	66.5
Golden State Water Company Southwest	7,303,405,789	6,894,299,322	409,106,467	6%	2	20%	66.7
Estero Municipal Improvement District	1,137,677,797	1,077,438,670	60,239,127	5%	2	20%	67.2
California Water Service Company King City	428,820,478	403,729,918	25,090,560	6%	2	20%	67.2
Menlo Park City of	1,058,240,665	769,095,397	289,145,268	27%	2	20%	67.7
Huntington Park City of	1,171,761,731	1,128,423,492	43,338,240	4%	2	20%	67.8

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Golden State Water Company S San Gabriel	664,867,252	637,528,317	27,338,935	4%	2	20%	68.1
Oxnard City of	5,742,131,037	5,086,123,686	656,007,351	11%	2	20%	68.1
Redwood City City of	2,525,846,774	2,179,170,327	346,676,447	14%	2	20%	68.4
Morro Bay City of	316,836,255	281,236,756	35,599,499	11%	2	20%	69.5
Inglewood City of	2,457,964,645	2,284,776,001	173,188,643	7%	2	20%	70.0
Goleta Water District	3,523,431,480	3,053,227,871	470,203,609	13%	2	20%	70.0
Lompoc City of	1,253,200,000	1,106,800,000	146,400,000	12%	2	20%	70.5
City of Big Bear Lake, Dept of Water & Power	610,520,000	590,469,860	20,050,140	3%	2	20%	70.5
Sweetwater Springs Water District	208,544,913	177,491,272	31,053,641	15%	2	20%	71.4
Golden State Water Company Artesia	1,402,138,690	1,348,796,812	53,341,879	4%	2	20%	71.7
McKinleyville Community Service District	344,448,000	300,869,000	43,579,000	13%	2	20%	72.1
Golden State Water Company Norwalk	1,214,317,928	1,131,519,080	82,798,848	7%	2	20%	73.2
San Lorenzo Valley Water District	416,952,583	335,050,267	81,902,316	20%	2	20%	73.8
Mountain View City of	2,967,854,797	2,531,213,885	436,640,912	15%	2	20%	74.0
Sweetwater Authority	5,185,495,337	4,886,767,783	298,727,554	6%	2	20%	74.1
San Gabriel Valley Water Company	9,747,519,587	9,124,165,807	623,353,780	6%	2	20%	74.4
Marina Coast Water District	1,063,425,908	946,396,368	117,029,540	11%	2	20%	74.8
Santa Ana City of	9,729,076,397	9,323,684,636	405,391,760	4%	2	20%	77.1
Sunnyvale City of	4,612,426,949	3,920,970,221	691,456,728	15%	2	20%	77.3
Vallejo City of	4,410,308,000	4,020,375,000	389,933,000	9%	2	20%	77.5
Dublin San Ramon Services District	2,779,417,000	1,959,505,000	819,912,000	29%	2	20%	77.5
California Water Service Company Dominguez	8,444,765,582	8,077,205,172	367,560,410	4%	2	20%	78.3
Montebello Land and Water Company	859,407,071	791,398,619	68,008,451	8%	2	20%	78.5
Valley County Water District	2,033,127,821	1,853,913,772	179,214,049	9%	2	20%	78.8
Santa Barbara City of	3,348,530,727	2,632,951,217	715,579,509	21%	2	20%	78.9
American Canyon, City of	915,968,361	777,155,653	138,812,708	15%	2	20%	79.1
Santa Clara City of	5,338,900,000	4,749,500,000	589,400,000	11%	2	20%	79.4
Alameda County Water District	10,539,100,000	8,458,900,000	2,080,200,000	20%	2	20%	80.2
Crestline Village Water District	185,010,871	167,499,027	17,511,844	9%	2	20%	80.3
Monterey Park City of	649,960,000	594,880,000	55,080,000	8%	2	20%	80.4
California Water Service Company Redwood Valley	108,182,674	82,440,411	25,742,263	24%	2	20%	80.6
Scotts Valley Water District	311,979,632	253,857,835	58,121,797	19%	2	20%	81.0
Greenfield, City of	573,049,890	501,684,126	71,365,764	12%	2	20%	81.2

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
California Water Service Company Mid Peninsula	3,986,792,209	3,551,780,554	435,011,655	11%	2	20%	81.5
San Diego City of	47,355,303,598	46,452,597,390	902,706,208	2%	2	20%	81.8
Long Beach City of	14,658,100,592	13,842,168,619	815,931,973	6%	2	20%	82.4
California Water Service Company Salinas District	4,612,101,098	4,065,974,106	546,126,992	12%	2	20%	82.9
Pomona City of	5,817,361,333	5,468,536,077	348,825,256	6%	2	20%	83.5
Rohnert Park City of	1,267,000,000	1,124,000,000	143,000,000	11%	2	20%	83.6
East Bay Municipal Utilities District	52,390,500,000	46,127,500,000	6,263,000,000	12%	2	20%	83.8
Lynwood City of	1,264,349,156	1,237,371,916	26,977,240	2%	2	20%	84.4
Hi-Desert Water District	744,117,577	733,074,472	11,043,105	1%	2	20%	85.2
Golden State Water Company Culver City	1,415,824,450	1,344,756,254	71,068,196	5%	2	20%	85.2
Hawthorne City of	1,070,747,789	1,135,592,223	-64,844,434	-6%	2	20%	85.6
Santa Rosa City of	5,454,466,874	4,447,473,373	1,006,993,501	18%	2	20%	86.5
Windsor, Town of	963,136,985	817,896,531	145,240,453	15%	2	20%	86.8
Millbrae City of	668,885,610	603,267,242	65,618,369	10%	2	20%	87.6
Burlingame City of	1,288,363,748	1,075,113,151	213,250,598	17%	2	20%	87.8
Great Oaks Water Company Incorporated	2,641,791,567	2,210,783,322	431,008,244	16%	2	20%	88.0
California Water Service Company Oroville	830,595,287	682,007,037	148,588,251	18%	2	20%	88.1
Westminster City of	3,064,371,990	2,956,971,359	107,400,630	4%	2	20%	88.2
San Buenaventura City of	4,446,346,994	3,813,888,925	632,458,069	14%	2	20%	88.9
Otay Water District	8,209,272,756	7,888,634,952	320,637,804	4%	2	20%	89.9
Fountain Valley City of	2,438,968,604	2,305,516,153	133,452,452	5%	2	20%	90.6
Santa Fe Springs City of	1,526,056,730	1,408,567,739	117,488,991	8%	2	20%	90.7
California Water Service Company Stockton	6,808,665,567	6,318,910,872	489,754,695	7%	2	20%	91.3
Golden State Water Company West Orange	4,000,477,969	3,830,090,258	170,387,711	4%	2	20%	91.9
Irvine Ranch Water District	15,406,744,246	15,015,266,341	391,477,904	3%	2	20%	92.3
Adelanto city of	1,091,834,544	993,603,394	98,231,150	9%	2	20%	92.4
Los Angeles Department of Water and Power	139,452,680,105	130,343,503,463	9,109,176,642	7%	2	20%	92.8
Crescent City City of	583,110,000	710,650,000	-127,540,000	-22%	2	20%	92.8
Hollister City of	832,612,930	742,476,980	90,135,950	11%	2	20%	92.9
Mesa Water District	4,434,609,825	4,283,056,327	151,553,499	3%	2	20%	92.9
California Water Service Company Hermosa/Redondo	2,984,799,071	2,983,495,666	1,303,406	0%	2	20%	93.4
Bellflower-Somerset Mutual Water Company	1,350,031,789	1,268,477,694	81,554,095	6%	2	20%	94.3
Rowland Water District	2,857,000,142	2,756,214,295	100,785,846	4%	2	20%	94.5

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Crescenta Valley Water District	1,200,433,997	1,043,760,838	156,673,159	13%	2	20%	94.5
San Jose Water Company	36,046,000,000	31,608,300,000	4,437,700,000	12%	2	20%	94.6
Azusa City of	5,165,530,597	4,670,763,054	494,767,543	10%	2	20%	95.0
El Segundo City of	1,692,179,532	1,788,496,457	-96,316,925	-6%	2	20%	95.4
Mid-Peninsula Water District	823,925,361	712,822,442	111,102,919	13%	2	20%	96.3
Callexico City of	1,524,360,000	1,440,570,000	83,790,000	5%	2	20%	96.8
Watsonville City of	2,045,660,752	1,803,744,576	241,916,176	12%	2	20%	96.9
Torrance City of	3,906,665,343	3,703,464,394	203,200,950	5%	2	20%	97.3
Lomita City of	591,013,026	547,632,425	43,380,600	7%	2	20%	97.4
Golden State Water Company Barstow	1,595,531,512	1,445,509,515	150,021,997	9%	2	20%	98.3
Escondido City of	4,625,134,351	4,059,907,513	565,226,838	12%	2	20%	98.8
Marin Municipal Water District	7,006,662,670	5,966,662,221	1,040,000,448	15%	2	20%	99.8
San Gabriel County Water District	1,612,133,643	1,485,957,453	126,176,190	8%	2	20%	100.5
Pittsburg City of	2,481,549,000	2,226,323,000	255,226,000	10%	2	20%	100.7
Huntington Beach City of	7,506,541,568	7,116,888,432	389,653,136	5%	2	20%	100.9
Oceanside City of	6,988,111,948	6,765,555,423	222,556,525	3%	2	20%	100.9
Santa Monica City of	3,462,200,000	3,321,100,000	141,100,000	4%	2	20%	101.0
Norwalk City of	559,456,000	511,830,000	47,626,000	9%	2	20%	101.0
Ukiah City of	678,601,000	551,722,000	126,879,000	19%	2	20%	101.0
Fairfield City of	5,435,000,000	4,853,000,000	582,000,000	11%	2	20%	101.1
Helix Water District	8,454,736,636	8,067,103,778	387,632,858	5%	2	20%	101.1
Camarillo City of	2,747,943,839	2,399,416,293	348,527,546	13%	2	20%	101.1
San Jose City of	5,294,000,000	4,707,000,000	587,000,000	11%	2	20%	101.1
Soledad, City of	581,571,300	531,785,500	49,785,800	9%	2	20%	101.2
Golden State Water Company S Arcadia	908,701,874	851,189,098	57,512,777	6%	2	20%	101.4
California-American Water Company Sacramento District	8,801,191,649	7,285,565,423	1,515,626,225	17%	2	20%	101.4
Carpinteria Valley Water District	1,160,826,158	1,028,941,051	131,885,107	11%	2	20%	101.8
El Monte City of	328,279,000	312,936,000	15,343,000	5%	2	20%	101.9
Groveland Community Services District	127,297,632	96,625,396	30,672,236	24%	2	20%	102.0
Whittier City of	2,041,957,743	2,084,064,264	-42,106,521	-2%	2	20%	102.3
Fortuna City of	303,008,000	276,986,000	26,022,000	9%	2	20%	102.6
Glendale City of	6,839,188,070	6,346,086,881	493,101,189	7%	2	20%	103.2
Alhambra City of	2,575,148,433	2,329,573,763	245,574,669	10%	2	20%	103.3

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Lathrop, City of	1,149,290,000	990,960,000	158,330,000	14%	2	20%	104.9
Anaheim City of	16,337,538,847	15,992,788,037	344,750,810	2%	2	20%	105.1
Vista Irrigation District	4,896,569,394	4,632,303,886	264,265,507	5%	2	20%	105.3
Gilroy City of	2,328,666,000	1,995,678,000	332,988,000	14%	2	20%	105.8
California Water Service Company Kern River Valley	222,882,376	201,376,182	21,506,194	10%	2	20%	105.9
Humboldt Community Service District	610,120,000	573,669,000	36,451,000	6%	2	20%	106.6
Coachella City of	1,395,900,000	1,294,010,000	101,890,000	7%	2	20%	106.9
Palo Alto City of	3,180,440,852	2,685,999,460	494,441,392	16%	2	20%	107.3
Napa City of	3,605,871,891	3,247,435,321	358,436,570	10%	2	20%	107.6
Orchard Dale Water District	589,289,272	550,757,340	38,531,931	7%	2	20%	107.8
Perris, City of	437,809,090	430,597,020	7,212,070	2%	2	20%	108.9
Downey City of	4,090,256,554	3,834,059,128	256,197,426	6%	2	20%	109.3
Lakewood City of	2,086,631,973	1,856,580,866	230,051,107	11%	3	25%	110.8
City of Newman Water Department	559,946,000	448,854,000	111,092,000	20%	3	25%	110.8
Milpitas City of	2,719,687,979	2,424,775,231	294,912,748	11%	3	25%	111.0
Golden State Water Company Placentia	1,868,334,327	1,778,757,770	89,576,557	5%	3	25%	112.5
Vallecitos Water District	4,390,033,350	4,037,168,840	352,864,510	8%	3	25%	112.9
Buena Park City of	3,777,921,445	3,441,805,698	336,115,747	9%	3	25%	113.1
Del Oro Water Company	369,631,917	306,051,990	63,579,927	17%	3	25%	113.2
Manhattan Beach City of	1,219,661,891	1,153,188,200	66,473,691	5%	3	25%	113.3
Pico Rivera City of	1,267,056,981	1,099,162,034	167,894,948	13%	3	25%	113.3
Livermore City of Division of Water Resources	1,642,615,000	1,199,514,000	443,101,000	27%	3	25%	113.4
Beaumont-Cherry Valley Water District	3,172,199,486	3,139,252,648	32,946,838	1%	3	25%	113.6
Pleasanton City of	4,439,552,000	3,099,891,000	1,339,661,000	30%	3	25%	113.7
Suburban Water Systems San Jose Hills	7,160,122,399	6,833,016,444	327,105,955	5%	3	25%	113.8
California Water Service Company Livermore	2,781,467,781	1,909,163,511	872,304,270	31%	3	25%	114.6
San Luis Obispo City of	1,387,716,506	1,278,706,170	109,010,336	8%	3	25%	114.7
Lakeside Water District	1,064,566,388	977,942,044	86,624,343	8%	3	25%	114.9
El Toro Water District	2,331,141,109	2,239,576,858	91,564,251	4%	3	25%	115.3
San Clemente City of	2,270,663,084	2,331,434,375	-60,771,291	-3%	3	25%	116.6
California Water Service Company Marysville	575,127,769	496,597,575	78,530,194	14%	3	25%	117.1
Sunny Slope Water Company	1,052,785,122	950,022,234	102,762,888	10%	3	25%	117.4
Healdsburg City of	540,150,000	446,810,000	93,340,000	17%	3	25%	118.2

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Valencia Water Company	7,817,224,611	6,780,899,767	1,036,324,844	13%	3	25%	118.4
San Fernando City of	839,719,127	786,931,196	52,787,931	6%	3	25%	118.4
Eureka City of	860,874,000	799,778,000	61,096,000	7%	3	25%	118.6
Alco Water Service	1,156,954,000	1,028,617,000	128,337,000	11%	3	25%	120.7
Moulton Niguel Water District	7,135,207,799	6,864,125,480	271,082,319	4%	3	25%	121.4
Riverside City of	17,427,511,870	15,956,944,380	1,470,567,490	8%	3	25%	122.5
Twentynine Palms Water District	666,765,336	641,552,256	25,213,080	4%	3	25%	123.0
North Marin Water District	2,457,000,000	1,986,810,000	470,190,000	19%	3	25%	123.0
Brea City of	2,826,761,129	2,727,376,444	99,384,685	4%	3	25%	123.7
Delano City of	2,386,120,000	2,229,650,000	156,470,000	7%	3	25%	124.0
El Centro City of	1,978,323,000	1,910,544,000	67,779,000	3%	3	25%	124.5
Brawley City of	1,842,390,000	1,088,690,000	753,700,000	41%	3	25%	125.0
Petaluma City of	2,407,770,000	2,071,485,000	336,285,000	14%	3	25%	125.1
South Coast Water District	1,639,847,306	1,549,814,557	90,032,749	5%	3	25%	125.7
Arroyo Grande City of	776,210,684	654,635,517	121,575,167	16%	3	25%	125.7
Eastern Municipal Water District	22,059,815,756	21,154,600,492	905,215,264	4%	3	25%	125.7
Tuolumne Utilities District	1,441,240,862	992,152,425	449,088,437	31%	3	25%	126.2
La Palma City of	545,401,972	497,342,471	48,059,501	9%	3	25%	127.3
California Water Service Company Dixon, City of	382,549,575	346,705,918	35,843,657	9%	3	25%	127.4
Tracy City of	4,529,625,694	3,497,663,768	1,031,961,925	23%	3	25%	127.5
Lake Arrowhead Community Services District	440,648,885	386,238,213	54,410,671	12%	3	25%	127.7
Martinez City of	1,027,679,751	871,695,210	155,984,540	15%	3	25%	128.1
Reedley City of	1,302,000,000	1,109,000,000	193,000,000	15%	3	25%	128.8
Davis City of	3,023,400,000	2,527,400,000	496,000,000	16%	3	25%	129.0
California Water Service Company Willows	364,301,895	318,682,696	45,619,200	13%	3	25%	129.0
Sacramento City of	28,979,000,000	23,440,000,000	5,539,000,000	19%	3	25%	129.3
Burbank City of	4,712,137,486	4,362,205,638	349,931,847	7%	3	25%	130.1
Ventura County Waterworks District No. 8	5,424,122,854	4,896,895,245	527,227,609	10%	3	25%	130.2
Padre Dam Municipal Water District	2,952,148,758	2,752,858,026	199,290,733	7%	3	25%	130.6
Ontario City of	8,782,999,363	8,499,508,622	283,490,741	3%	3	25%	131.3
Pico Water District	1,029,001,320	960,057,631	68,943,690	7%	3	25%	131.5
Santa Maria City of	3,370,607,161	3,257,210,864	113,396,297	3%	3	25%	131.5
Valley of the Moon Water District	800,300,880	646,691,259	153,609,621	19%	3	25%	131.5

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
San Juan Capistrano City of	2,040,416,466	1,962,283,810	78,132,655	4%	3	25%	131.8
Laguna Beach County Water District	872,082,691	867,064,579	5,018,112	1%	3	25%	132.0
Santa Margarita Water District	7,105,190,366	6,932,489,109	172,701,256	2%	3	25%	132.3
Monte Vista Water District	2,603,464,922	2,359,464,115	244,000,807	9%	3	25%	133.3
Lincoln Avenue Water Company	613,030,807	557,668,649	55,362,157	9%	3	25%	133.8
San Gabriel Valley Fontana Water Company	10,907,224,816	10,188,722,419	718,502,397	7%	3	25%	134.3
Tehachapi, City of	582,624,632	536,291,818	46,332,814	8%	3	25%	134.6
North Tahoe Public Utility District	350,120,000	332,141,000	17,979,000	5%	3	25%	134.7
Fresno City of	36,603,191,424	30,513,707,650	6,089,483,774	17%	3	25%	134.9
Golden State Water Company Simi Valley	1,830,698,487	1,657,215,187	173,483,300	9%	3	25%	134.9
Fullerton City of	7,215,373,767	6,969,105,034	246,268,733	3%	3	25%	135.0
Pasadena City of	8,349,297,631	7,614,975,148	734,322,483	9%	3	25%	136.0
Suburban Water Systems Whittier/La Mirada	5,584,910,982	5,234,793,399	350,117,583	6%	3	25%	136.2
Big Bear City Community Services District	266,135,894	256,898,007	9,237,888	3%	3	25%	136.3
Lake Hemet Municipal Water District	2,880,852,466	2,579,961,258	300,891,208	10%	3	25%	136.4
Suisun-Solano Water Authority	1,038,300,000	918,300,000	120,000,000	12%	3	25%	136.5
Diablo Water District	1,487,225,000	1,338,770,000	148,455,000	10%	3	25%	137.8
Garden Grove City of	6,584,316,860	6,185,605,054	398,711,806	6%	3	25%	138.3
Woodland City of	2,938,159,020	2,454,292,204	483,866,816	16%	3	25%	139.0
Antioch City of	4,642,068,000	4,042,923,000	599,145,000	13%	3	25%	139.0
Contra Costa Water District	8,855,338,380	7,547,370,752	1,307,967,628	15%	3	25%	139.9
Rialto City of	2,544,482,555	2,596,683,954	-52,201,399	-2%	3	25%	140.8
Sunnyslope County Water District	694,319,032	596,249,460	98,069,572	14%	3	25%	141.5
San Bernardino City of	11,535,034,614	10,722,937,586	812,097,028	7%	3	25%	143.6
Cerritos City of	2,219,233,953	1,991,297,621	227,936,332	10%	3	25%	143.7
San Jacinto City of	756,372,530	651,046,816	105,325,714	14%	3	25%	144.1
Tulare, City of	4,805,328,900	4,324,313,800	481,015,100	10%	3	25%	144.7
Sacramento County Water Agency	9,991,675,171	8,451,666,395	1,540,008,776	15%	3	25%	145.3
Benicia City of	1,543,102,018	1,217,315,761	325,786,257	21%	3	25%	146.1
Orange City of	7,732,617,288	7,437,395,896	295,221,393	4%	3	25%	146.3
Stockton City of	8,304,530,000	7,263,300,000	1,041,230,000	13%	3	25%	146.3
Ceres City of	1,985,969,000	1,848,968,000	137,001,000	7%	3	25%	147.3
Monrovia City of	1,885,000,000	1,673,000,000	212,000,000	11%	3	25%	147.5

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Chino City of	3,332,449,959	3,123,999,542	208,450,416	6%	3	25%	147.6
Apple Valley Ranchos Water Company	4,101,713,205	3,942,264,436	159,448,769	4%	3	25%	147.7
Sonoma City of	583,798,675	494,362,234	89,436,441	15%	3	25%	147.8
Humboldt Bay Municipal Water District	146,056,000	148,820,000	-2,764,000	-2%	3	25%	148.1
Victorville Water District	4,985,852,685	4,486,322,447	499,530,238	10%	3	25%	149.1
Paso Robles City of	1,705,474,000	1,511,094,000	194,380,000	11%	3	25%	149.5
Sanger City of	1,552,776,000	1,422,246,000	130,530,000	8%	3	25%	149.6
Rubidoux Community Service District	1,400,190,000	1,335,510,000	64,680,000	5%	3	25%	149.8
Phelan Pinon Hills Community Services District	635,139,826	675,206,517	-40,066,691	-6%	3	25%	150.3
Covina City of	1,500,350,310	1,393,914,200	106,436,110	7%	3	25%	150.4
California-American Water Company Los Angeles District	5,579,752,754	5,179,473,602	400,279,151	7%	3	25%	151.4
Golden State Water Company San Dimas	3,063,589,946	2,950,649,842	112,940,105	4%	3	25%	151.4
Patterson City of	1,040,156,104	948,595,320	91,560,784	9%	3	25%	151.9
Yreka, City of	593,290,000	519,800,000	73,490,000	12%	3	25%	151.9
Trabuco Canyon Water District	764,121,596	767,705,962	-3,584,366	0%	3	25%	152.4
Arvin Community Services District	740,072,884	667,768,501	72,304,383	10%	3	25%	153.6
San Dieguito Water District	1,583,703,106	1,621,176,020	-37,472,914	-2%	3	25%	154.0
Atascadero Mutual Water Company	1,291,000,000	1,056,900,000	234,100,000	18%	3	25%	154.6
Santa Paula City of	1,218,270,506	1,081,725,724	136,544,782	11%	3	25%	154.7
Manteca City of	3,844,580,000	3,212,645,000	631,935,000	16%	3	25%	154.9
Castaic Lake Water Agency Santa Clarita Water Division	7,358,051,073	6,493,567,237	864,483,836	12%	3	25%	154.9
Roseville City of	8,448,024,096	6,930,859,852	1,517,164,244	18%	3	25%	155.0
La Verne City of	2,094,159,141	1,955,656,970	138,502,171	7%	3	25%	155.2
Nipomo Community Services District	665,258,273	527,032,098	138,226,175	21%	3	25%	156.0
Imperial, City of	687,420,000	671,127,000	16,293,000	2%	3	25%	156.1
Lamont Public Utility District	993,121,000	914,688,000	78,433,000	8%	3	25%	156.4
Walnut Valley Water District	5,119,451,770	4,877,344,159	242,107,610	5%	3	25%	158.4
Chino Hills City of	3,952,965,804	3,587,674,904	365,290,900	9%	3	25%	159.1
Thousand Oaks City of	3,106,634,920	2,792,709,655	313,925,265	10%	3	25%	159.3
Rosamond Community Service District	719,200,000	712,000,000	7,200,000	1%	3	25%	160.0
Corona City of	8,699,410,000	8,297,070,000	402,340,000	5%	3	25%	160.4
Hesperia Water District City of	3,676,581,651	3,538,094,794	138,486,856	4%	3	25%	160.5
Fillmore City of	482,079,202	446,216,000	35,863,202	7%	3	25%	160.6

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Joshua Basin Water District	409,078,118	382,604,644	26,473,473	6%	3	25%	161.3
Calaveras County Water District	1,468,843,000	1,200,100,000	268,743,000	18%	3	25%	161.5
East Valley Water District	5,405,695,956	4,782,879,831	622,816,125	12%	3	25%	161.7
Tustin City of	2,984,049,613	2,895,189,929	88,859,684	3%	3	25%	162.0
Brentwood City of	3,038,220,000	2,663,210,000	375,010,000	12%	3	25%	162.4
California Water Service Company Los Altos/Suburban	3,714,706,268	3,136,645,836	578,060,431	16%	3	25%	162.5
Mission Springs Water District	2,072,832,166	1,979,439,888	93,392,277	5%	3	25%	162.7
Yuba City City of	4,215,490,000	3,629,080,000	586,410,000	14%	3	25%	162.7
Palmdale Water District	5,291,175,472	5,010,063,446	281,112,026	5%	3	25%	163.2
California-American Water Ventura District	4,397,006,571	3,988,454,052	408,552,519	9%	3	25%	163.6
Porterville City of	3,123,277,400	2,849,237,200	274,040,200	9%	3	25%	164.0
Madera City of	2,268,235,000	2,115,715,000	152,520,000	7%	3	25%	164.8
Golden State Water Company Ojai	564,830,864	487,636,661	77,194,203	14%	4	35%	165.5
Blythe City of	806,370,000	811,680,000	-5,310,000	-1%	4	35%	165.5
South Pasadena City of	1,045,005,526	935,193,595	109,811,931	11%	4	35%	166.1
Ramona Municipal Water District	1,087,105,531	1,049,746,665	37,358,866	3%	4	35%	166.8
La Habra City of Public Works	2,397,728,848	2,535,032,864	-137,304,016	-6%	4	35%	167.3
Banning City of	2,219,758,574	2,058,002,667	161,755,907	7%	4	35%	167.7
Livingston City of	1,870,481,000	1,810,513,000	59,968,000	3%	4	35%	167.9
Dinuba City of	1,126,830,000	977,550,000	149,280,000	13%	4	35%	169.8
Folsom City of	5,476,678,514	4,592,545,306	884,133,208	16%	4	35%	170.7
Loma Linda City of *	1,379,990,569	1,323,839,525	56,151,044	4%	4	35%	172.4
Hanford City of	3,229,776,700	2,793,029,816	436,746,884	14%	4	35%	173.6
Lemoore City of	1,967,044,000	1,783,354,000	183,690,000	9%	4	35%	173.7
Jurupa Community Service District	6,546,170,411	6,107,698,865	438,471,545	7%	4	35%	174.0
Turlock City of	5,571,505,100	4,909,059,441	662,445,659	12%	4	35%	174.1
Pismo Beach City of	434,216,578	359,495,587	74,720,991	17%	4	35%	175.1
Indio City of	5,340,000,000	5,006,100,000	333,900,000	6%	4	35%	175.2
Mammoth Community Water District	499,483,000	447,407,000	52,076,000	10%	4	35%	175.6
California Water Service Company Selma	1,492,399,536	1,239,212,977	253,186,559	17%	4	35%	175.8
California Water Service Company Visalia	8,033,215,230	7,144,292,537	888,922,693	11%	4	35%	176.6
Hemet City of	1,116,063,947	1,045,970,047	70,093,900	6%	4	35%	176.7
Western Municipal Water District of Riverside	5,887,379,311	5,683,989,367	203,389,944	3%	4	35%	176.9

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Newhall County Water District	2,611,216,927	2,326,139,289	285,077,638	11%	4	35%	178.5
West Kern Water District	4,045,106,581	3,679,048,346	366,058,235	9%	4	35%	180.2
Rincon Del Diablo Municipal Water District	1,766,766,437	1,514,883,284	251,883,153	14%	4	35%	182.2
Shafter City of	1,350,000,000	1,154,000,000	196,000,000	15%	4	35%	182.9
Triunfo Sanitation District / Oak Park Water Service	687,285,830	597,937,369	89,348,461	13%	4	35%	184.0
Vacaville City of	4,536,829,418	3,868,833,993	667,995,425	15%	4	35%	185.5
Los Angeles County Public Works Waterworks District 40	12,870,711,018	11,980,791,220	889,919,798	7%	4	35%	185.6
California Water Service Company Bakersfield	18,863,864,960	16,841,305,153	2,022,559,807	11%	4	35%	186.2
Galt City of	1,302,667,000	1,052,546,000	250,121,000	19%	4	35%	186.4
Cucamonga Valley Water District	12,916,078,335	12,778,430,872	137,647,463	1%	4	35%	187.6
Wasco City of	1,096,680,000	952,170,000	144,510,000	13%	4	35%	187.6
California Water Service Company Chico District	6,759,462,002	5,680,893,778	1,078,568,223	16%	4	35%	188.1
South Tahoe Public Utilities District	1,641,227,000	1,550,474,000	90,753,000	6%	4	35%	189.3
Winton Water & Sanitary District	432,243,000	400,904,000	31,339,000	7%	4	35%	189.3
Carlsbad Municipal Water District	4,342,002,850	4,259,269,173	82,733,677	2%	4	35%	189.3
Riverbank City of	860,786,846	737,503,990	123,282,856	14%	4	35%	191.6
Modesto, City of	15,589,770,183	13,698,086,925	1,891,683,258	12%	4	35%	192.7
El Dorado Irrigation District	10,044,044,386	7,600,810,386	2,443,234,000	24%	4	35%	193.1
Morgan Hill City of	2,262,311,000	1,786,089,000	476,222,000	21%	4	35%	193.4
Exeter City of	600,332,681	535,287,408	65,045,273	11%	4	35%	194.4
Kerman, City of	880,465,000	769,624,000	110,841,000	13%	4	35%	194.7
Citrus Heights Water District	3,723,178,405	3,023,575,391	699,603,014	19%	4	35%	195.4
San Bernardino County Service Area 70	457,322,702	431,251,330	26,071,373	6%	4	35%	196.0
Colton, City of	2,519,711,330	2,487,549,794	32,161,536	1%	4	35%	196.0
Georgetown Divide Public Utilities District	512,901,000	410,416,000	102,485,000	20%	4	35%	196.4
Oakdale City of	1,417,000,000	1,139,000,000	278,000,000	20%	4	35%	197.6
Elsinore Valley Municipal Water District	6,567,437,756	6,285,445,931	281,991,825	4%	4	35%	199.6
Fallbrook Public Utility District	3,340,661,415	3,012,268,347	328,393,068	10%	4	35%	200.0
Sierra Madre City of	616,142,059	546,575,118	69,566,941	11%	4	35%	203.6
Atwater City of	2,358,960,000	1,821,770,000	537,190,000	23%	4	35%	203.7
Lee Lake Water District	760,491,304	738,717,756	21,773,548	3%	4	35%	204.4
Poway City of	2,984,245,124	2,893,299,991	90,945,133	3%	4	35%	204.8
Shasta Lake City of	309,004,338	258,461,000	50,543,338	16%	4	35%	205.5

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Newport Beach City of	4,220,349,478	3,924,557,845	295,791,633	7%	4	35%	206.6
Redding City of	7,109,010,000	5,934,100,000	1,174,910,000	17%	4	35%	208.2
Lodi City of Public Works Department	3,904,230,000	3,932,720,000	-28,490,000	-1%	4	35%	209.1
Elk Grove Water Service	1,982,552,982	1,615,618,816	366,934,166	19%	4	35%	209.7
Ventura County Waterworks District No 1	2,688,665,294	2,241,890,403	446,774,892	17%	4	35%	210.1
Golden State Water Company Orcutt	1,941,781,239	1,705,636,709	236,144,529	12%	4	35%	210.1
Lincoln City of	2,592,190,000	2,158,050,000	434,140,000	17%	4	35%	211.1
West Valley Water District	5,029,549,361	4,747,557,536	281,991,825	6%	4	35%	212.6
Sacramento Suburban Water District	9,630,759,000	8,318,514,000	1,312,245,000	14%	4	35%	212.9
Nevada Irrigation District	2,750,729,000	2,339,997,000	410,732,000	15%	4	35%	215.7
Rubio Canyon Land and Water Association	561,116,157	508,002,375	53,113,783	9%	4	35%	215.9
Norco City of	2,009,949,357	1,856,691,656	153,257,702	8%	4	35%	216.1
Beverly Hills City of	2,984,049,613	2,900,957,499	83,092,114	3%	4	35%	216.6
Carmichael Water District	2,598,570,000	2,107,250,000	491,320,000	19%	4	35%	220.2
Riverside Highland Water Company	971,591,200	889,248,544	82,342,656	8%	4	35%	220.9
Yorba Linda Water District	5,380,523,933	5,128,021,662	252,502,271	5%	4	35%	221.3
Olivenhain Municipal Water District	5,326,497,766	5,149,755,952	176,741,814	3%	4	35%	222.0
Olivehurst Public Utility District	1,161,641,529	959,245,393	202,396,137	17%	4	35%	222.4
Rio Linda - Elverta Community Water District	770,017,391	629,595,315	140,422,076	18%	4	35%	225.0
Upland City of	5,523,683,657	5,024,215,355	499,468,301	9%	4	35%	226.2
Discovery Bay Community Services District	986,000,000	808,000,000	178,000,000	18%	4	35%	226.5
California Water Service Company Bear Gulch	3,623,142,017	3,228,861,790	394,280,227	11%	4	35%	227.7
Corcoran City of	1,162,447,000	950,206,000	212,241,000	18%	4	35%	228.4
Glendora City of	3,108,798,089	3,089,127,284	19,670,805	1%	4	35%	228.9
Los Banos, City of	2,053,870,000	1,905,101,000	148,769,000	7%	4	35%	229.2
Clovis City of	6,737,008,000	6,080,852,000	656,156,000	10%	4	35%	229.8
Camrosa Water District	2,469,015,365	2,141,221,863	327,793,502	13%	4	35%	231.4
East Niles Community Service District	2,504,168,216	2,213,508,744	290,659,473	12%	4	35%	231.4
Rio Vista, city of	641,312,000	606,333,000	34,979,000	5%	4	35%	235.0
Placer County Water Agency	7,686,123,771	6,395,079,193	1,291,044,578	17%	4	35%	235.1
West Sacramento City of	3,567,747,274	2,941,460,832	626,286,443	18%	4	35%	238.5
Montecito Water District	1,577,349,003	836,688,709	740,660,294	47%	4	35%	240.5
Paradise Irrigation District	1,721,400,000	1,355,900,000	365,500,000	21%	4	35%	241.1

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
Fruitridge Vista Water Company	1,000,084,300	823,053,400	177,030,900	18%	4	35%	242.3
Los Angeles County Public Works Waterworks District 29	2,383,427,229	2,356,081,777	27,345,452	1%	4	35%	242.8
Fair Oaks Water District	3,068,959,978	2,450,034,519	618,925,459	20%	4	35%	243.3
Indian Wells Valley Water District	1,861,884,000	1,789,365,000	72,519,000	4%	4	35%	244.1
San Bernardino County Service Area 64	758,722,238	679,807,540	78,914,699	10%	4	35%	246.3
Pinedale County Water District	267,792,348	224,289,932	43,502,416	16%	4	35%	247.0
Truckee-Donner Public Utilities District	1,264,764,466	1,144,274,188	120,490,278	10%	4	35%	247.8
Anderson, City of	572,342,000	498,676,000	73,666,000	13%	4	35%	248.6
Golden State Water Company Claremont	2,873,781,490	2,604,204,605	269,576,886	9%	4	35%	249.9
California Water Service Company Palos Verdes	5,184,622,055	4,979,661,507	204,960,548	4%	4	35%	250.9
California City City of	1,192,746,563	1,264,824,899	-72,078,336	-6%	4	35%	251.3
Casitas Municipal Water District	777,155,653	678,096,820	99,058,834	13%	4	35%	253.2
Yucaipa Valley Water District	2,981,840,000	2,837,629,000	144,211,000	5%	4	35%	253.4
Golden State Water Company Cordova	4,051,962,495	3,483,514,680	568,447,814	14%	4	35%	265.5
Red Bluff City of	904,393,249	764,891,212	139,502,037	15%	4	35%	270.9
East Orange County Water District	247,060,552	225,554,358	21,506,194	9%	4	35%	271.6
Bakman Water Company	1,032,655,497	893,235,946	139,419,551	14%	4	35%	277.3
Bakersfield City of	11,705,594,680	10,744,390,565	961,204,114	8%	4	35%	277.5
Merced City of	6,872,130,000	6,271,910,000	600,220,000	9%	4	35%	279.6
Hillsborough Town of	877,331,034	658,647,771	218,683,262	25%	4	35%	281.2
Ripon City of	1,431,002,833	1,223,409,134	207,593,699	15%	4	35%	282.0
Susanville City of	560,250,000	602,070,000	-41,820,000	-7%	4	35%	287.6
Valley Center Municipal Water District	6,829,813,325	6,798,466,417	31,346,907	0%	4	35%	288.4
Bella Vista Water District	3,596,422,200	1,864,847,717	1,731,574,483	48%	4	35%	288.7
California Water Service Company Antelope Valley	186,061,165	216,691,199	-30,630,034	-16%	4	35%	291.4
Arcadia City of	4,352,404,027	4,033,916,843	318,487,185	7%	4	35%	291.5
Madera County	891,468,716	660,496,910	230,971,806	26%	4	35%	298.4
Oildale Mutual Water Company	2,485,920,537	2,317,129,497	168,791,039	7%	4	35%	303.5
Tahoe City Public Utilities District	372,523,331	326,265,848	46,257,483	12%	4	35%	307.8
Kingsburg, City of	1,009,319,000	825,793,000	183,526,000	18%	4	35%	308.0
Quartz Hill Water District	1,430,054,382	1,276,190,597	153,863,785	11%	4	35%	308.1
Linda County Water District	971,706,000	880,037,000	91,669,000	9%	4	35%	312.3
Las Virgenes Municipal Water District	5,714,163,209	5,470,784,778	243,378,431	4%	4	35%	323.0

Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction

Supplier Name	Total Water Production		Total Water Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Percent Saved (Jun-14 - Feb-15, compared to 2013, gallons)	Tier	Conservation Standard	Sep-2014 R-GPCD
	2013 (Jun - Feb)	2014/15 (Jun-14 - Feb-15)					
California Water Service Company Westlake	2,085,449,133	1,928,388,745	157,060,388	8%	4	35%	326.5
Orange Vale Water Company	1,274,470,101	1,008,190,832	266,279,269	21%	4	35%	336.2
Redlands City of	7,033,861,488	6,969,114,810	64,746,679	1%	4	35%	341.5
Rancho California Water District	16,377,618,572	16,074,902,597	302,715,976	2%	4	35%	366.9
Coachella Valley Water District	28,323,853,249	27,188,261,025	1,135,592,223	4%	4	35%	368.7
Desert Water Agency	8,823,730,792	8,310,188,943	513,541,849	6%	4	35%	378.5
San Juan Water District	3,594,268,324	2,773,624,539	820,643,785	23%	4	35%	383.7
South Feather Water and Power Agency	1,435,400,000	1,292,100,000	143,300,000	10%	4	35%	391.5
Valley Water Company	999,093,060	898,861,161	100,231,899	10%	4	35%	396.6
Rainbow Municipal Water District	3,976,593,060	3,760,749,074	215,843,985	5%	4	35%	428.5
Vaughn Water Company	3,206,837,858	2,989,389,519	217,448,339	7%	4	35%	464.6
Serrano Water District	829,682,903	749,230,186	80,452,717	10%	4	35%	520.1
Golden State Water Company Cowan Heights	703,676,157	691,163,462	12,512,695	2%	4	35%	556.5
Myoma Dunes Mutual Water Company	757,700,108	707,153,944	50,546,164	7%	4	35%	562.7
Santa Fe Irrigation District	2,820,156,121	2,869,480,251	-49,324,131	-2%	4	35%	584.3
Statewide	1,626,751,431,372	1,478,173,631,488	148,577,799,883	9%			

MONTHLY OPERATIONS REPORT

March 2015

Town of Discovery Bay, CA

2040 Days of Safe Operations

91,496 worked hours since last recordable incident

TRAINING:

Safety, Operations, & Equipment

Safety	Hours
West Monthly Regional Safety Webinar	2.0
Weekly Safety Topics	
Operations	
Dystor Sand Filter	
Ventis MX4 Air Meter	2.0

REPORTS SUBMITTED TO REGULATORY AGENCIES

Monthly Discharge Monitoring Report (DMR)
Monthly electronic State Monitoring Report (eSMR)
Monthly Coliform Report, California Department of Public Health (CDPH)

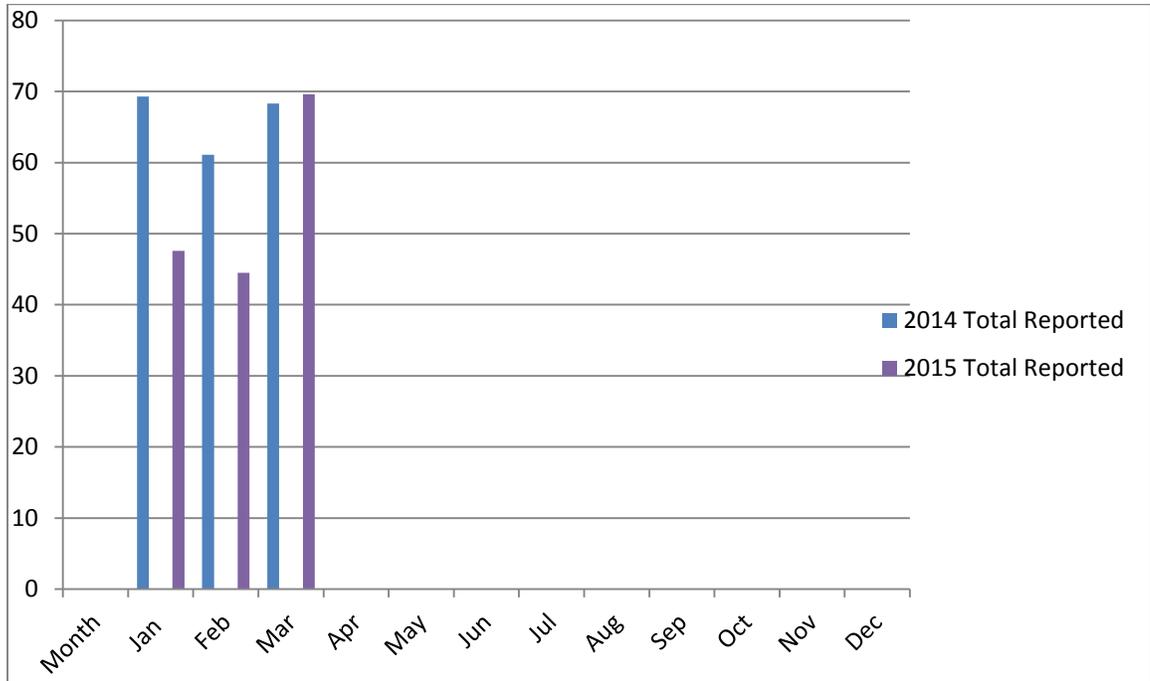
WATER SERVICES

# of Active Wells	Water Produced (MG)	Chemical (Hypo) Delivered	Fire Hydrant Flushing
5	69.6	950	0

Note: Well 4 in lead and Well 5 in lag to offset specific conductivity

2015 Water Production Table (MG) by Month

January	February	March	April	May	June
47.6	44.5	69.6			
July	August	September	October	November	December



Bacteriological Test Results:

Routine Bacteria Samples Collected	No. Total Coliform Positives	No. Fecal/E. coli Positives	Brown Water Calls
20	0	0	0

WASTEWATER SERVICE

<i>WW Effluent Parameter</i>	<i>Permit Limits</i>	<i>February Lab Data</i>	<i>March Lab Data</i>
Flow, MG Effluent, monthly total		35.3	36.7
Flow, MG Daily Influent Flow, avg.	N/A	1.33	1.43
Flow, MG Daily Discharge Flow, avg.	2.1	1.26	1.18
Effluent BOD ₅ , lbs/d, monthly avg.	350	51	34
Effluent TSS, lbs/d, monthly avg.	525	85	63
Effluent BOD ₅ , mg/L, monthly avg.	20	4	3
Effluent TSS, mg/L, monthly avg.	30	7	6
Total Coli form 7 day Median Max	23	1	0
Total Coli form Daily Maximum	240	2	2
% Removal BOD ₅ , monthly avg.	85% min.	98	98
% Removal, TSS, monthly avg.	85% min.	95	96
Electrical Conductivity, umhos/cm annual avg.	2100	1950	1970

Wastewater Laboratory Analysis

Blue – new parameter added

National Pollution Discharge Elimination System (NPDES)

NPDES Related Excursions	Permit Parameter	NPDES Parameter Limit	Actual Parameter Result
0	None	0	N/A

Bacteriological Test Results:

Routine Bacteria Samples Collected	No. Total Coliform Positives	No. Fecal/E. coli Positives	7-Day Median Excursion
14	0	0	0

# of Active Lift Stations	# of Inactive Lift Stations	Chemical Usage Polymer-gals	SSO	Wastewater Received (MG)

15	0	39	0	44.8
-----------	----------	-----------	----------	-------------

COLLECTION:

- Flushed 0 ft. of sanitary sewer lines, YTD **25763** ft.
- CCTV **25463 ft.** entire system completed (Deadline is May 2015)
- Inspected **23** manhole & covers. **113** YTD
- Performed valve exercising
- Performed weekly lift station inspections.

MAINTENANCE:

Preventive and Corrective

Total # of WO's Completed	Total Hours
213	146

Work Order Back-Log

Aging 8 - 30 Days	Aging > 30 Days
37	29

Call & Emergency Responses

Call Outs	Emergencies
7	0

Personnel Hours & Overtime:

Regular Hours	Overtime
1408	66

TERMS

WWTP	WASTEWATER TREATMENT PLANT
WTP	WATER TREATMENT PLANT
WL	WILLOW LAKE
NP	NEWPORT
VFD	VARIABLE FREQUENCY DRIVE
WO	WORK ORDER
PLC	PROGRAMMABLE LOGIC CONTROLLER
L/S	LIFT STATION
SSO	SANITARY SEWER OVERFLOW
BOD	BIOLOGICAL OXYGEN DEMAND
TSS	TOTAL SUSPENDED SOLIDS
MGD	MILLION GALLONS PER DAY
mg/l	MILLIGRAMS PER LITRE
CCTV	CLOSED CIRCUIT TELEVISION
PPM	PARTS PER MILLION
RAS	RETURN ACTIVATED SLUDGE
WAS	WATSE ACTIVATED SLUDGE
UV	ULTRAVIOLET LIGHT



TOWN OF DISCOVERY BAY
A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

No Back Up
Documentation
For Agenda Item I



TOWN OF DISCOVERY BAY
A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

No Back Up
Documentation
For Agenda Item J



TOWN OF DISCOVERY BAY
A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

No Back Up
Documentation
For Agenda Item K



TOWN OF DISCOVERY BAY
A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

No Back Up
Documentation
For Agenda Item L

FINAL



**CONTRA COSTA COUNTY
AVIATION ADVISORY COMMITTEE
MINUTES OF MEETING
February 12, 2015**

MEETING CALLED: Chair Mike Bruno called the meeting to order at 10:04 a.m. at the Director of Airports Office.

PRESENT: **Roger Bass**, District II
Mike Bruno, Chair, CCC Airports Business Association
Tina Dodson, DVC
DeWitt Hodge, Member at Large
Keith McMahon, City of Concord
Rudi Raab, District I
Russell Roe, District V

ABSENT: **Ronald Reagan**, District III
Derek Mims, City of Pleasant Hill
Ed Young, Member at Large
Tom Weber, District IV

STAFF: Keith Freitas, Director of Airports
Beth Lee, Assistant Director of Airports
Jake Allred, Administrative Services Assistant II

**OPENING COMMENTS
BY CHAIR:**

Mike Bruno welcomed new DVC Representative, Tina Dodson, and asked for introductions of the public in attendance.

**PUBLIC COMMENT
PERIOD:**

Duane Allen reported that men in 4-wheel drive trucks are driving in mud puddles around the Airport and requested that they be filled in with rocks. Airport staff will check into ruts next to the roads. Mr. Allen knows someone who wants a hangar at Buchanan Field and requested timing of vacant hangars.

**APPROVAL OF
MINUTES:**

Moved by Rudi Raab; seconded by Keith McMahon. Approved unanimously. Yes: Roger Bass, Mike Bruno, Tina Dodson, DeWitt Hodge, Keith McMahon, Rudi Raab, and Russell Roe. No:

None. Abstained: None. Absent: Derek Mims, Ronald Reagan, Tom Weber, Ed Young.

**APPROVAL OF
CONSENT ITEMS:**

Moved by Roger Bass; seconded by DeWitt Hodge. Approved unanimously. Yes: Roger Bass, Mike Bruno, Tina Dodson, DeWitt Hodge, Keith McMahon, Rudi Raab, and Russell Roe. No: None. Abstained: None. Absent: Derek Mims, Ronald Reagan, Tom Weber, Ed Young.

PRESENTATION/SPECIAL REPORTS – None

DISCUSSION/ACTION ITEMS:

a. Items Pulled from Consent

None

b. Review Draft Letter to Pilots/Airport Managers Regarding Byron Area Aerobatic Box Training

- Comments regarding draft letter have been incorporated to date. Unless there are further comments or changes, airport staff will send it out to area airports for their pilots.
- Question was raised whether directing such activities towards other airports will create problems for them. Staff is conferring with those airports. *If either airport (Tracy/New Jerusalem) objects, then the language will be revised to be more generic.

Motion to approve with stipulation* by DeWitt Hodge; seconded by Tina Dodson. Approved unanimously. Yes: Roger Bass, Mike Bruno, Tina Dodson, DeWitt Hodge, Keith McMahon, Rudi Raab, and Russell Roe. No: None. Abstained: None. Absent: Derek Mims, Ronald Reagan, Tom Weber, Ed Young.

c. Airport Security and Staffing Issues

- There have been theft issues along John Glenn Drive over the past few months or so.
 - Trespassing, snipping wire, stealing (downspout), and a perceived organized theft of a Hertz vehicle.
 - Thefts started about 2 months ago and have been escalating since attempted break-in at Pacific States Aviation's maintenance hangar.

Comments, concerns, and recommendations:

- Tenants, Sheriff, and Airport staff are working on a collaborative approach to work on this issue.
- Airport Staff will increase random night patrols for a period of time.
- Fixed Base Operators are taking this issue very seriously due to cost of repair and replacement.
- Area is under County control so the Sheriff is the first responder. Sheriff has committed to increasing patrols and parking along John Glenn Drive.

- Fence line around the Airport is vulnerable in the areas near the golf course, allowing people to gain access to the airfield. This was due to a tree falling down. Airport staff will contact the golf course to have them fix the fence.
- Perimeter control is needed at minimum and possibly a different, more expensive fencing in some areas was suggested.
- Sheriff's helicopter squad is vigilant, but has moved to the west side of the Airport, resulting in less nighttime presence on the east side.
- Suggestion was made to limit items of value to reduce crimes of opportunity.
- Higher security presence and overall team approach is needed to address this issue.

d. New Westside Airport Sign

- Once the new sign is powered up, tenant panels can be marketed for use.
- Considering signs for John Glenn Drive and the end of Diamond/Center as money becomes available.

e. AAC Positions Due to Expire March 2015

- Roger Bass was reappointed on February 10, 2015.
- Representatives were reminded to seek reappointments before terms end.

f. Staff Changes

- Judith Evans hired as new clerical.
- Introduction of Jake Allred, Environmental and Community Relations.
- Working to fill three Operations staff within the next few weeks.

g. Economic Development Incentive Program (EDIP) Update

- Focus on retention, new tenants and business.
- Top priorities (short and long term targets):
 - Update website and signs (already in progress)
 - Request AAC assistance to evaluate the EDIP concepts and ideas.
 - AAC will review information and report back to staff in one month.

h. Airport Website Update

Airport staff will send out questions, gather information and report back at next month's meeting.

UPDATES/ANNOUNCEMENTS

a. Airport Committee Update

None

b. What is happening at Buchanan Field & Byron Airports/Other Airports

- Nothing to add beyond what has already been discussed.

c. Airport Land Use Commission (ALUC) Update

- Russell Roe reported that the biggest issue at present is the Sustainable Farm.
 - There is a lease for this activity, but ALUC needs more specific details in order to review and give final approval.

- Request return of budget process in order to discuss issues with significant budget implications that affect the Airport Enterprise Fund.
- Request to have this issue on the next AAC agenda to get update on status (next meeting is scheduled for end of February).

d. AAC Announcements

None

e. Airport Staff Announcements

Long time Airport Secretary Tillie Larkin passed away. Request was made to adjourn the meeting in her honor.

FUTURE AGENDA ITEMS/COMMENTS

None

ADJOURNMENT: The meeting was adjourned by the Chair at 11:08 a.m.

STATE ROUTE 4 BYPASS AUTHORITY
Antioch - Brentwood - Oakley and Contra Costa County

JOINT EXERCISE OF POWERS AGENCY

February 12, 2015

The regular Board meeting of the STATE ROUTE 4 BYPASS AUTHORITY was called to order in the Tri Delta Transit Meeting Room, 801 Wilbur Avenue, Antioch, California, by Chair Tony Tiscareno at 6:41 P.M.

ROLL CALL

PRESENT: Doug Hardcastle (Oakley), Mary N. Piepho (Contra Costa County), Steve Barr, Alternate for Vice Chair Robert (Bob) Taylor (Brentwood), and Chair Tony Tiscareno (Antioch)

ABSENT: None

STAFF: Dale Dennis, Program Manager
 Stephen Siptroth, Legal Counsel
 David F. Schmidt, Legal Counsel

PUBLIC COMMENT

There were no comments from the public.

ELECTION OF OFFICERS

Chair

Director Piepho nominated Robert (Bob) Taylor to serve as the Chair of the Authority. Director Barr seconded the nomination. There were no other nominations, and the nominations were closed. **Robert (Bob) Taylor was** elected to serve as the Chair of the Authority for 2015 by the following vote:

AYES: Barr, Hardcastle, Piepho, Tiscareno
NOES: None
ABSTAIN: None
ABSENT: None

Vice Chair

Director Piepho nominated Doug Hardcastle to serve as the Vice Chair of the Authority. Director Barr seconded the nomination.

State Route 4 Bypass Authority Minutes
 February 12, 2015
 Page 2

There were no other nominations, and the nominations were closed. **Doug Hardcastle** was elected to serve as the Vice Chair of the Authority for 2015 by the following vote:

AYES: Barr, Hardcastle, Piepho, Tiscareno
 NOES: None
 ABSTAIN: None
 ABSENT: None

As the alternate for the newly-elected Chair (Robert (Bob) Taylor), Director Barr chaired the meeting at this time.

CONSENT ITEMS

On motion by Director Piepho, seconded by Director Tiscareno, the Authority adopted the Consent Items by the following vote:

AYES: Hardcastle, Piepho, Tiscareno, Barr
 NOES: None
 ABSTAIN: None
 ABSENT: None

- A. APPROVED Minutes of the October 9 and November 13, 2014 Board meetings (*August, September, and December 2014 meetings cancelled*).
- B. ACCEPTED Audit Report prepared by Wallace Rowe and Associates, Certified Public Accountants, for the Fiscal Year ending June 30, 2014.
- C. APPROVED an amendment to the Consulting Services Agreement with Dean Chapman and Associates in a not-to-exceed amount of \$8,000, for a revised payment limit of \$70,500, for right-of-way appraisal services for the SR4/Balfour Road Interchange project, and AUTHORIZED the Secretary or designee to sign the amendment on behalf of the Authority.

DETERMINATION ITEMS

- A. RECEIVE Status Report on Projects Associated with the Former SR4 Bypass

Program Manager Dale Dennis reported that the SR4/SR160 Connector Ramps Project was currently moving forward on schedule for completion by the end of this year. The Balfour Road Interchange Project was also moving forward in the project development phase; the design should be completed in a March/April timeframe; utility relocations would commence at the end of February or early March; and the main highway contractor was expected to start in the fall for what is estimated to be a two-year contract.

State Route 4 Bypass Authority Minutes
February 12, 2015
Page 3

Mr. Dennis also reported with respect to the Contra Costa Water District (CCWD) Los Vaqueros Pipeline (LVP) line through the Balfour Road Interchange, which Authority staff had been working with Caltrans, the Contra Costa Transportation Authority (CCTA), and CCWD to allow the LVP to remain in place. He reported that Caltrans had approved a Longitudinal Utility Exception and that the Authority's agreement with CCWD had been amended last year to allow the LVP to remain in place, which would save significant relocation costs while expediting the Balfour Road Interchange Project.

Director Piepho commented that the on-ramp westbound on Lone Tree Way turning eastbound on Highway 4, which included a designated HOV lane, was in an awkward configuration.

Mr. Dennis advised that he would look into that situation.

- B. CONDUCT public hearing and CONSIDER adoption of Resolution of Necessity for acquisition of real property rights required for the SR4/Balfour Road Interchange project, as recommended by the SR4 Bypass Authority's Program Manager, Brentwood area.

Mr. Dennis advised of the need to conduct a public hearing to consider a Resolution of Necessity for property required for the SR4/Balfour Road Interchange project, and distributed two right of way maps clarifying the real property involved. He also distributed a revised staff report, advising that the staff report had been revised under Subsection B.2 where some text had inadvertently been omitted under the finding: "The project is planned and located in the manner that will be most compatible with the greatest public good and the least private injury." The third sentence in that finding was revised to read: "*The interchange configurations and highway alignments that were considered, and the selected configuration and alignment, are more specifically discussed in the Environmental Impact Report [SCH# 89032824], the Supplemental Environmental Impact Report [SCH# 1989032824], Addendum #10 and Addendum #11, all pertaining to this project.*"

Mr. Dennis noted that when the CCWD had acquired rights for the LVP, some surface and minor subsurface rights to the property remained in the name of the property owner, Mary Lou Cox, and after a year of negotiations with the property owner for the Authority to acquire those rights and with no resolution, a Resolution of Necessity was required to acquire the property.

Lucy Owens, Real Property staff for the Authority referred to the revised staff report dated February 12, 2015 which contained specific information supporting the condemnation and the request for the Resolution of Necessity. She recommended that the public hearing be opened, public testimony be taken, and that the Resolution of Necessity be approved subject to the revised staff report. She identified the size of the landlocked and barren

State Route 4 Bypass Authority Minutes
February 12, 2015
Page 4

property to be acquired as less than an acre and affirmed that negotiations would continue with the property owner for settlement of the acquisition.

PUBLIC HEARING OPENED

There was no one to speak.

PUBLIC HEARING CLOSED

On motion by Director Piepho, seconded by Director Tiscareno, the Board FOUND that the public interest and necessity required the proposed project; the project is planned and located in the manner that will be most compatible with the greatest public good and the least private injury; the property sought to be acquired is necessary for the project; and the offer of compensation required by Section 7267.2 of the Government Code has been made to the owner or owners of record; and ADOPTED Resolution of Necessity No. 2015/01, subject to the revised staff report, to acquire the required property rights by eminent domain (Project No. 4660-6X4425 and 4660-6X4497), by the following vote:

AYES: Hardcastle, Piepho, Tiscareno, Barr
NOES: None
ABSTAIN: None
ABSENT: None

BOARDMEMBER COMMENTS

There were introductions of staff and the new members of the Board.

CORRESPONDENCE

There was no correspondence.

ADJOURNMENT

On motion by Director Hardcastle, seconded by Director Tiscareno, the Board voted to adjourn the meeting of the State Route 4 Bypass Authority at 6:58 P.M. to the next meeting scheduled for Thursday, March 12, 2015.

Respectfully submitted,

Anita L. Tucci-Smith
Minutes Clerk



EAST CONTRA COSTA FIRE PROTECTION DISTRICT

Meeting Minutes Board of Directors Regular Meeting

Monday March 2, 2015 – 6:30 P.M.
Meeting Location: 3231 Main Street, Oakley

BOARD OF DIRECTORS		
Greg Cooper	Joel Bryant-President	Randy Pope
Robert Kenny	Ronald Johansen-Vice President	Stephen Smith
Jonathan Michaelson	Cheryl Morgan	Joe Young

CALL TO ORDER: (6:31 P.M.)

PLEDGE OF ALLEGIANCE: (6:31 P.M.)

ROLL CALL: (6:32 P.M.)

Directors Present: Bryant, Cooper, Johansen, Kenny, Michaelson, Morgan, Pope, Smith, Young

Directors Absent:

PUBLIC COMMENTS: (6:32 P.M.)

There were four (4) Public Speakers – Tom Baldocchi, Matt Turturici, John Renner, Mark Myers

CONSENT CALENDAR: (6:38 P.M.)

C.1 Approve Minutes from February 2, 2015 Regular Board of Directors Meeting

Motion by: Director Young to approve Consent Calendar Item C.1

Second by: Director Smith

Vote: Motion carried: 9:0:0

Ayes: Bryant, Cooper, Johansen, Kenny, Michaelson, Morgan, Pope, Smith, Young

Noes:

Abstained:

Absent:

DISCUSSION ITEMS

(6:39 P.M.)

D.1 Consideration of the Engineer's Report for a Proposed Fire Suppression Assessment District and Adoption of Resolutions:

- a) Declaring the intention to establish the assessment district and levy and collect the assessment and preliminarily approve the Engineer's Report in support of the assessment
- b) Providing notice of public hearing and directing the mailing of the assessment ballots; and
- c) Adopting updated procedures governing the completion, return and tabulation of assessment ballots for the proposed assessment in accordance with Proposition 218.

The District's assessment engineer provided a revised page 4-3 of the proposed Engineer's Report.

There were five (5) Public Speakers – Gil Guerrero, Jim Frazier, Tom Baldocci, Kevin Romick, and Mayor Bob Taylor

Motion by: Director Young to Adopt\ Resolutions

a, b, c, including the amended page 4-3 for the Engineer's Report.

Second by: Director Smith

Vote: Motion carried: 9:0:0

Ayes: Bryant, Cooper, Johansen, Kenny, Michaelson, Morgan, Pope, Smith, Young

Noes:

Abstained:

Absent:

(7:37 P.M.)

D.2 Receive Operational Update for February 2015

Chief Henderson gave the Operational Update for February 2015

There were no (0) Public Speakers

INFORMATIONAL STAFF REPORTS: (7:38 P.M.)

Chief Henderson provided information on the District's Open Houses scheduled for March 5, 11 and 14.

DIRECTORS' COMMENTS: (7:38 P.M.)

Director Bryant thanked the Staff and NBS for a job well done on preparing the data for the Engineer's Report

Director Kenny thanked Chief Henderson for being the Grand Marshall for the Boat Parade on April 17, 2015

INFORMATIONAL REPORTS AND REQUESTS FOR FUTURE AGENDA ITEMS FROM BOARD MEMBERS: (7:39 P.M.)

None

ADJOURN TO THE REGULAR BOARD MEETING SCHEDULED: April 6, 2015

Motion by: Director Michaelson to adjourn to the next Regular Board Meeting scheduled on April 6, 2015

Vote: Motion carried: 9:0:0

Ayes: Bryant, Cooper, Johansen, Kenny, Michaelson, Morgan, Pope, Smith, Young

Noes:

Abstained:

Absent:

DRAFT



**CONTRA COSTA COUNTY
AVIATION ADVISORY COMMITTEE
MINUTES OF MEETING
March 12, 2015**

MEETING CALLED: Chair Mike Bruno called the meeting to order at 10:01 a.m. at the Director of Airports Office.

PRESENT: Roger Bass, District II
Mike Bruno, Chair, CCC Airports Business Association
DeWitt Hodge, Member at Large
Keith McMahon, City of Concord
Derek Mims, City of Pleasant Hill
Rudi Raab, District I
Ronald Reagan, District III
Tom Weber, District IV

ABSENT: Tina Dodson, DVC
Russell Roe, District V
Ed Young, Member at Large

STAFF: Keith Freitas, Director of Airports
Judy Evans, Clerical

**OPENING COMMENTS
BY CHAIR:**

Mike Bruno asked for introductions and welcomed Maurice Gunderson, who has been selected by the Internal Operations Committee (IOC) to take over Ed Young's At-Large position on the AAC. The recommendation will go to the full Board of Supervisors for final approval.

**PUBLIC COMMENT
PERIOD:**

EAA Chapter 393 is sponsoring a fully restored Ford Tri-Motor from April 30 to May 3, 2015, at Buchanan Field Airport. Twenty minute rides will be offered for a fee. Posters and flyers are available.

**APPROVAL OF
MINUTES:**

Moved by Tom Weber; seconded by Ronald Reagan. Approved unanimously. Yes: Roger Bass, Mike Bruno, DeWitt Hodge, Keith McMahon, Derek Mims, Rudi Raab, Ronald Reagan, and

Tom Weber. No: None. Abstained: None. Absent: Tina Dodson, Russell Roe, and Ed Young.

**APPROVAL OF
CONSENT ITEMS:**

Moved by Derek Mims; seconded by Rudi Raab. Approved unanimously. Yes: Roger Bass, Mike Bruno, DeWitt Hodge, Keith McMahon, Derek Mims, Rudi Raab, Ronald Reagan, and Tom Weber. No: None. Abstained: None. Absent: Tina Dodson, Russell Roe, and Ed Young.

PRESENTATION/SPECIAL REPORTS – None

DISCUSSION/ACTION ITEMS:

a. Items Pulled from Consent

None

b. Airport Security Issues

- Keith Freitas reported that there have been thefts over the last two months at Buchanan Field. Wire theft seems to be the most prevalent source of crime.
 - Airport staff, the Sheriff's Department, and the businesses have created a task force to address security issues.
 - Some security measures the task force is looking into for both airports include:
 - Raising awareness of Airport businesses to protect valuables
 - Increasing night patrols by Sheriff/Operations staff
 - Installing security cameras
 - Hiring contract security
- DeWitt Hodge asked about security at Byron Airport.
 - Keith responded that there have been no recent issues at Byron, although there have been incidents similar to Buchanan in the past. Appears to be cyclical.

c. Byron Construction 2015

- Construction at Byron includes resurfacing of runways and new signage and is projected to be a 30 to 45 day project which should start in September.
- Plan is to keep one runway open while work is done on the other.
- Construction cost is estimated to be 1M to 1.2M and is FAA fundable up to 95%. Other funding sources include Caltrans and the remainder from the Airport Enterprise Fund.
- Question was raised regarding possibility of future plans for runway extension.
 - Airport must demonstrate need first, only then would FAA would consider funding. Airport staff continues to work on this issue.

d. Buchanan Field Construction 2015

- Airport Enterprise Fund will fully fund the Taxiway Reconstruction Project.
- June 2015 timeframe to begin project and estimated to take up to 2.5 months to complete.

- Anticipate 10K per month in lost revenue due to waiver of monthly rent for approximately 100 tenants over the course of the reconstruction period.
 - Question was raised whether the gravel in the farthest row of the East Ramp will be removed.
 - Area will not be paved, but work will be done to prevent gravel from spilling onto Taxilane.
 - Question was asked whether it is absolutely necessary to vacate hangars during the project.
 - Vacating is not mandatory, but tenants will not have access to hangars during the reconstruction period.
- e. **April Elections of AAC Officers**
- Reminder that April is election month.
 - Tom Weber announced he does not plan to serve next term and would like to see new representation.
- f. **Economic Development Incentive Program Update**
- Keith Freitas asked if there was any AAC input.
 - Mike Bruno proposed to take a month to digest and discuss at next month's meeting.
- g. **AAC Members Expire 3/1/15: Ron, Roger, and Derek**
- Ronald Reagan's term will expire at the end of March.
 - Derek Mims will participate in the elections for the City of Pleasant Hill two weeks from now and will re-interview.
 - Mike Bruno reminded Derek Mims that he has 60 days to hold over his position and stressed to all the importance of continuity for the sake of the committee.

UPDATES/ANNOUNCEMENTS

- a. **Airport Committee Update**
- Keith briefly reviewed the issues discussed at the March 9, 2015, Airports Committee Meeting.
 - Discussion topics included:
 - Final approval for Airport video
 - 2013/2014 Airport final budget—report accepted
 - Byron and Buchanan construction projects
 - Airport Economic Development Incentive Program (EDIP)
 - Security issues
- b. **What is happening at Buchanan Field & Byron Airports/Other Airports**
- Tenant Appreciation Barbeque will be Thursday, May 7, 2015.
 - The new Airport video will be uploaded to YouTube and Airport Website.
 - Survey for website re-design was sent out to tenants and will be sent out to AAC members.
- c. **Airport Land Use Commission (ALUC) Update**
- Tom Weber reported that one item pending is the Sustainable Farm.

- The project is much smaller now than what was originally presented.
- ALUC to receive Crop Management Plan and Wildlife and Pest Management Plans to ensure there is no increase in birds and other wildlife that may create safety issues for the Airport.
- Sustainable Farm project is likely to get conditional approval.
- Question was raised how ALUC will enforce compliance to ensure safety of pilots and the Airport.
 - Since the Sanitary District is the landlord, they should be responsible for enforcing compliance.

d. AAC Announcements

None

e. Airport Staff Announcements

None

FUTURE AGENDA ITEMS/COMMENTS

Economic Development Incentive Plan (EDIP).

ADJOURNMENT: The meeting was adjourned by the Chair at 10:50 a.m.



TOWN OF DISCOVERY BAY
A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

No Back Up
Documentation
For Agenda Item N



TOWN OF DISCOVERY BAY
A COMMUNITY SERVICES DISTRICT



President – Chris Steele • Vice-President – Bill Pease • Director – Kevin Graves • Director – Robert Leete • Director – Mark Simon

No Back Up
Documentation
For Agenda Item O